

**MIDDLE SCHOOL STUDENTS' ATTITUDES TOWARD A  
PHYSICAL EDUCATION PROGRAM**

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(ABSTRACT)

To combat the decreasing levels of physical activity in many young people, health professionals are calling upon middle and high school physical education to equip students with the skills and knowledge necessary to become physically active for a lifetime. In order to accomplish this goal in physical education, it is imperative that student attitudes be considered when making curricular and program decisions. Therefore, the purpose of this study was to examine middle school students' attitude toward a physical education program and to determine the various aspects of the program that appear to contribute to positive and negative attitudes towards middle school physical education. Students (N=348) from one middle school located in a mid-Atlantic state completed a survey regarding their attitudes toward physical education. All responses were categorized using a critical incident technique. Results indicate that positive attitudes towards physical education decline between grades six and eight. This trend was more apparent for females than for males. Major categories associated with positive and negative attitudes towards physical education include curriculum content, class atmosphere, teacher behavior, dressing out, and self-perception.

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## CHAPTER 1 INTRODUCTION

Early adolescence is a unique and fascinating period in human development. This period of great transition marks the end of childhood and the introduction into young adulthood. As children make the transformation into adults many developmental changes will occur. For instance, young teens experience a time of accelerated growth second only to infancy (Carnegie Council on Adolescent Development [CCAD], 1995), the roles of peers and family will take on new meanings (Schickedanz, Schickedanz, Forsyth, & Forsyth, 1998), and thinking patterns will be altered (Adams & Gullotta, 1989). With all of the developmental changes occurring, early adolescence is truly a fascinating period in the human life span.

Because early adolescence is a time of metamorphosis from childhood to adulthood, it serves as a ripe opportunity for young people to establish patterns and habits that could continue into the future. One such pattern is the choice to initiate and maintain a physically active lifestyle. Individuals who are physically active during adolescence are more likely to be physically active during adulthood (Dishman, 1988; Kuh & Cooper, 1992). This is of eminent importance due to the recent surge in research substantiating the health related benefits that come to those who consistently maintain a physically active lifestyle (Biddle, 1995; Calfas & Taylor, 1994; Covey & Feltz, 1991; Lee, 1995). With this in mind, health professionals are alarmed at the decrease in levels of physical activity that begin during early adolescence and continue throughout adolescence.

### Physical Activity Trends During Early Adolescence

The National Children and Youth Fitness Study [NCYFS] examined the physical activity habits of individuals in grades five through twelve (Ross, Dotson, Gilbert, & Katz, 1985). Using a self reported physical activity recall instrument the results indicated that boys in grades seven through nine averaged 118 minutes of physical activity per day, while girls averaged 107. For both genders there was a sharp decrease in physical activity between grades seven and ten.

In more recent times, The National Health Interview Survey-Youth Risk Behavior Survey [NHIS-YRBS] and the Youth Risk Behavior Survey [YRBS], added to the research on adolescent physical activity trends (as cited in United States Department of Health and Human Services [USDHHS], 1996). The NHIS-YRBS confirmed that as adolescents grow older, levels of physical activity decrease. For instance, 6.3% of males and 8.3% of females are sedentary at age fourteen. By age eighteen, the numbers have inflated to 18.8% for males and 18.7% for females. The percentage of young people reporting participation in vigorous physical activity for at least 3 days per week also decreases from 76.1% of 14-year-old males and 63.1% of females to 48.4% for males and 37.5% for females. These reports clearly illustrate that levels of physical activity begin to decrease during early adolescence and continue decreasing into adulthood.

### The Call to Physical Education

In an attempt to combat the decline in physical activity during adolescence, health professionals are calling upon physical education to equip students with the skills and knowledge to maintain a physically active lifestyle. The National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP] (1997) recommends that physical education implement “curricula and instruction that emphasize enjoyable participation in physical activity” [and] “help students develop the knowledge, attitudes, motor skills, behavioral skills, and confidence needed to adopt and maintain physically active lifestyles” (p. 205).

Although secondary physical education is seen as a promising setting to encourage adolescents to begin and maintain a physically active lifestyle, historically it has come under severe scrutiny for its inability to provide meaningful learning experiences for students (Graham, 1990; Griffey, 1987; Locke, 1992; Siedentop, 1987; Stroot, 1994). For instance, many programs offer a very limited curriculum, that in no way takes into account the needs and/or desires of students and many teachers utilize inappropriate pedagogical techniques which hamper the success of students. Despite these flaws, many still believe that secondary physical education still has the greatest potential to promote life long physical activity to the early adolescent (Armstrong &

McManus, 1994; Haywood, 1991; McGinnis, Kanner, & DeGraw, 1991; Morris, 1991; Pennington & Krouscas, 1999). Sallis and McKenzie (1991) share this view when they write “the public health goal for physical education is to prepare children for a lifetime of regular physical activity” (p. 133).

Recognizing the enormous potential physical education can have in the promotion of lifelong physical activity, several nationally acclaimed documents were recently developed to assist middle school physical education programs meet the needs of the early adolescent. These documents for the first time give physical education a national platform on which to proclaim its goals and purposes.

One of the initial documents to provide physical education with a national statement of purpose was published by the National Association of Sport and Physical Education [NASPE] and was appropriately entitled, Outcomes of quality physical education programs (1992a). The document which is intended “to guide the development of sound instructional practices in physical education” (NASPE, 1992a, p. 5), offers the following definition of a physically educated person:

1. Has learned skills necessary to perform a variety of physical activities.
2. Is physically fit.
3. Does participate regularly in physical activity.
4. Knows the implications of and the benefits from involvement in physical activities.
5. Values physical activity and its contributions to a healthful lifestyle.

Following the outcomes project, Guidelines for middle school physical education (1992b) was developed by the Middle and Secondary School Physical Education Council [MASSPEC]. This document identified appropriate middle school physical education guidelines on issues such as: curriculum, instruction, student health and safety, scheduling, time allotment, class sizes, facilities, equipment, supplies, measurement and evaluation. Additionally, MASSPEC published Program appraisal checklist for middle school physical education programs (1992c) to be used as a program assessment tool.

To further bolster physical education into the 21st century MASSPEC produced Appropriate practices for middle school physical education [APMSPE]

(1995a). Following the pattern set by the Council on Physical Education for Children in the publication of Developmentally appropriate physical education practices for children (1992d), the APMSPPE document gives examples of appropriate and inappropriate middle school physical education practices. The examples offered are taken from four general areas: curriculum, instruction, assessment, and support.

As an attempt to ensure credibility and accountability for physical education NASPE published, Moving into the future: National standards for physical education (1995b). NASPE reports the purpose of this document is to (p.viii):

establish content standards for the physical education school program that clearly identify consensus statements related to what a student should know and be able to do as a result of a quality physical education program, and establish teacher-friendly guidelines for assessment of the content standards that are consistent with instructionally integrated orientations the role of assessment in the teaching/learning process.

This document, if utilized, has the potential to assist middle school physical education programs in creating and implementing curricula, as well as formulating ways to assess student outcomes.

Although not written exclusively for middle school physical education, a recent report from the United States Department of Health and Human Services entitled: Physical activity and health: A report of the surgeon general (1996) has also contributed to the promotion of quality physical education. This first ever report, documents the health benefits that derive from prescribing to a physically active lifestyle. In recognizing the importance of physical activity to the health of young adolescents, the report recommended that the amount of K-12 physical education be increased.

The information provided in these documents has the potential to assist middle school physical education program leaders in their goal of promoting physical activity among early adolescents. However, to heighten the likelihood of that goal becoming a reality middle school physical education programs should also encompass the thoughts, feelings, and attitudes of students (NCCDPHP, 1997). This is especially important when considering the positive

relationship that has been found between attitudes toward physical education and participation in physical activity (Ferguson, Yesalis, Pomrehn, & Kirkpatrick, 1989; Zakarian, Hovell, Hofstetter, Sallis, & Keating, 1994). With this in mind, student attitudes towards physical education and the factors influencing those attitudes, should also be considered as middle school physical education attempts to provide programs that encourage the early adolescent to engage in consistent patterns of physical activity.

### Attitudes Toward Physical Education

Student attitudes toward physical education has been under investigation since the 1930's. Traditionally, the purpose of such inquiry has been to identify factors that contribute to positive and negative feelings toward physical education. Investigators believed that having such information would improve the quality of physical education by allowing teachers to consider student insights when making curricular or program decisions. Subsequently, research in this area has been plentiful. The preponderance of attention, however, has focused on college (Alden, 1932; Bell & Walters, 1953; Brumbach, 1968; Brumbach & Cross, 1965; Bullock & Alden, 1933; Campbell, 1968; Figley, 1985; Keogh, 1962) and high school students (Carr, 1945; Earl & Stennett, 1987; Luke & Sinclair, 1991; Rice, 1988; Tannehill, Romar, O'Sullivan, England, & Rosenberg, 1994).

The few studies conducted on junior high and middle school students indicate that positive attitudes toward physical education appear to be strongest at the sixth grade level for both boys and girls. With each passing grade, however, attitudes toward physical education become less favorable (King, 1994). Although this attitudinal decline transpires in both genders, it is more severe in girls (Treanor, Graber, Housner, & Wiegand, 1998).

The identification of possible factors which contribute to students overall attitude towards physical education have varied. In one of the earliest studies in this topic, Nemson (1949) while attempting to identify specific annoyances that lead students to have negative feelings toward physical education, discovered that boys with positive attitudes towards physical education were most irritated by the personal hygiene of the physical education teacher (e.g. smell of tobacco on the breath of the teacher). Conversely, boys who were categorized as having a

poor attitude by their teacher were most annoyed with the requirement of having to take physical education. More recently Tannehill and Zakrajsek (1993) reported winning, success, performing well, being included, teamwork, participating and having fun as the factors which many middle and high school students associate with positive physical education experiences. On the other hand, negative experiences related to fitness exercises and injuries. Carlson (1994) found student attitudes toward physical education were influenced by culture (gender, idolization of elite sports figures), society (family, mass media, sporting experience, skill level, peers, previous physical education experiences, and perceptions of fitness), and school (teacher influence).

Additional research in 1995 set out to "describe and analyze what students think, feel, and know about various aspects of their physical education programs" (Graham, 1995, p. 364). Researchers found that 21% of junior high school students sampled, strongly disagreed with the statement, "I enjoy gym class". Reasons for discontentment included: irrelevant subject matter, perceived lack of ability, public display of athletic inadequacy, uneasiness with competition, and feelings of isolation (Carlson, 1995). Portman (1995) while studying unskilled sixth-graders also found that physical education was an unpleasant experience which led to feelings of isolation, embarrassment, and humiliation.

Based on this literature it is apparent that for some junior high or middle school students physical education is a miserable experience, while for others this content area is enjoyable and worthwhile. In either case, as students progress through each grade overall attitudes towards physical education decrease. This is especially noteworthy, when considering the decline in physical activity that transpires during adolescence. In other words, as adolescents age, attitudes toward physical education become less favorable and levels of physical activity decrease. The parallelism of these two trends, indicate the importance of providing a physical education experience which will encourage young adolescents to initiate and maintain a physically active lifestyle. However, in order to provide meaningful physical education experiences for middle school students additional research investigating student attitudes toward middle school physical education must be undertaken.

### Statement of Purpose

Therefore, the purpose of this study was to examine middle school students' attitudes toward a physical education program and to determine the various aspects of the program that appear to contribute to positive and negative attitudes toward middle school physical education.

### Research Questions

1. What aspects of physical education do sixth, seventh, and eighth grade boys and girls with positive attitudes toward physical education find most and least enjoyable?
2. What aspects of physical education do sixth, seventh, and eighth grade boys and girls with negative attitudes toward physical education find most and least enjoyable?

### Significance of the Study

Through the investigation of student attitudes toward a physical education program, and the incidents which influence those attitudes, it is hoped that middle school physical education programs will be better equipped to provide a meaningful physical education experience to all students by considering such information when making curricular, pedagogical, or other program decisions.

### Delimitations

The sample for this study was delimited to those students attending one specific middle school located in a suburban community in the southeastern region of the United States.

### Limitations

Due to ethical considerations, this study was limited to those students who provide written assent and parental consent forms. Additionally, this study was limited by the responses given by the middle school students sampled. Although subjects were encouraged to respond honestly and genuinely to survey questions, response sincerity may vary.



## Definition of Terms

For the purpose of this study the following terms will be used:

Attitude is "the affect for or against a psychological object" (Thurstone, 1931, p. 261).

Critical Incident Technique is a set of procedures for collecting information about human behavior "in such a way as to facilitate their potential usefulness in solving practical problems" (Flanagan, 1954, p. 327).

Early Adolescence is a period of human development which extends roughly from ages ten through fourteen and is usually triggered by the onset of puberty.

Exercise is a derivative of physical activity that is "planned, structured, and repetitive and has as a final or an immediate objective the improvement or maintenance of physical fitness" (Caspersen, Powell, & Christenson, 1985, p. 126).

Physical Activity is a broad term that describes "any bodily movement produced by skeletal muscles that result in energy expenditure" (Caspersen et al., 1985, p. 126).

Physical Fitness is considered to be the "ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure time activities and to meet unforeseen emergencies" (United States Department of Health and Human Services, 1996, p. 20).

Psycho-Social Theory of Human Development is an epigenetic theory that describes human development in eight stages.

Puberty is the point in human development at which sexual reproduction is made possible.

Transescence is "the stage of development which begins prior to the onset of puberty and extends through the early stages of adolescence" (Eichhorn, 1966, p. 3).

## Summary

Early adolescence is a period in human development when many life-long patterns begin. One such pattern, that has tremendous health implications, is the choice to begin and maintain a physically active lifestyle. Unfortunately, many young people are opting to be physically inactive. This trend begins during early adolescence and continues throughout adulthood.

Since this trend begins during the time in which most early adolescents are attending the middle school, many are calling upon middle school physical educators to develop curricula that equip students with the knowledge, attitudes, skills, and confidence needed to adopt and maintain physically active lifestyles. As more middle school physical education programs undertake this goal, it is crucial that the attitudes of the middle school student be considered when planning programs and implementing curricula. Thus, the purpose of this study was to examine middle school students' attitudes toward a physical education program and the factors which contribute to those attitudes.

The following chapter reviews the literature that served as the foundation for this study. It will include a review of the literature on early adolescent development, the history and philosophy of the middle school, middle school physical education, the global construct of attitude, and student attitudes toward physical education.

## CHAPTER 2

### REVIEW OF LITERATURE

The purpose of this study was to examine middle school students' attitudes toward a physical education program and the factors which contribute to those attitudes. In this chapter the literature that serves as the groundwork for this current study is reviewed. It has been divided into five sections. In section one the physical, cognitive, social, and emotional development that occurs during early adolescence is discussed. In section two the history and philosophy of the middle school and how it attempts to meet the specific needs of early adolescents is described. In section three the status of middle school physical education in the United States is analyzed. In section four the global concept of attitude is reviewed, while in section five student attitudes toward physical education are examined.

#### Development During Early Adolescence

Adolescence is one of the most fascinating and complex periods in the human life span. This period of great development, is a time of accelerated growth and change (CCAD, 1995). Physical, cognitive, social and emotional development transpires during early adolescence. Physical development is triggered with the onset of puberty, a period of growth more rapid than any other time in life with the exception of infancy (Strasburger & Brown, 1991). Although not as visible, but equally important is cognitive development. Growth in this domain is highlighted by the enhanced capacity to think in the abstract (Adams & Gullotta, 1989). Social development is most commonly identified by the emphasis of peer relationships and the superficial apathy towards family (Schickedanz et al., 1998; Furman & Buhrmester, 1985). Finally, emotional development challenges the early adolescent to explain and define the concept of self (Caissy, 1994). In the developing adolescent each of these domains influence each other, however for sake of clarity each domain will be further explained separately.

#### Physical Domain

Sometime during late childhood and prior to puberty (the point at which sexual reproduction is made possible) many physical changes begin to take

place. This period is commonly referred to as pubescence. The increase in height and weight is so rapid during pubescence that the term “growth spurt” has been coined (Atwater, 1983; Manning, 1993; Schickedanz et al., 1998). The pubescent growth spurt begins at about age nine or ten for girls and at about eleven or twelve for boys. By the time the accelerated growth ends girls will have grown an average of 13 inches, while boys will have grown an average of 12 to 14 inches (Tanner, 1978).

During the growth spurt, bone growth begins in the legs and continues in the trunk. At the same time that bones are lengthening, connective cartilage located at the ends of bones are ossifying. When the ends are completely closed, the skeleton is mature and no other growth will take place. Once the adolescent has experienced an increase in height, other skeletal changes occur. For example, the male adolescent’s chest and shoulders broaden, while the female adolescent’s hips widen (Schickedanz et al., 1998).

In addition to skeletal growth, tissue and organ growth also increase during pubescence. Specifically, “girls gain almost two times as much fatty tissue as boys, whereas boys gain twice as much muscle tissue as girls” (Schickedanz et al., 1998, p. 563). During this time of rapid growth, boys have an increase in arm strength. Prior to pubescence boys and girls have equal upper body strength, but during pubescence adolescent male strength doubles.

Although adolescents continue to grow after the conclusion of the growth spurt, growth will never again have the same intensity. In fact, for all practical purposes, adolescents have reached their full adult height by the time pubescence ends (Schickedanz et al., 1998).

Puberty is “the point in physical maturation when sexual reproduction becomes possible” (Schickedanz et al., 1998, p. 560). The first sign of this is the onset of menstruation for girls and “the first seminal emission in boys” (Atwater, 1983 p. 42). After the first sign it may, however, take up to a year before some adolescents are capable of consistent sexual reproduction. Reproduction consistency is recognized when the female adolescent begins discharging a mature egg with every regular menstrual cycle and when the male’s testes begin producing a greater proportion of mature sperm. Most young people have embarked upon this stage by middle adolescence (Atwater, 1983).

The entire process of physical growth and sexual maturation is “controlled by a complex interplay of hormones” (Schickedanz et al., 1998, p. 562). Hormones are secreted directly into the bloodstream by endocrine glands. The pituitary gland, is one type of endocrine gland, that is under the control of the brain’s hypothalamus (Atwater, 1983; Adams & Gullota, 1989). The initiation of the pituitary gland by the hypothalamus is the cornerstone of the puberty process.

Physical development during adolescence is marked by an extreme and rapid growth spurt which will increase body size and effect body shape. With the onset of puberty, adolescents are able to successfully pro-create. Although, all adolescents experience these physical changes, the rates and intensity will vary among individuals (Manning, 1993).

### Cognitive Domain

In explaining cognitive development Jean Piaget and Barbel Inhelder (1969) theorized that maturing children pass through four developmental stages: sensory-motor (birth to 2), preoperational (2 to 7), concrete operational (7 to 12) and formal operational (12 and beyond). The concrete operational and formal operational stages are most applicable to the cognitive development of the early adolescent and will therefore be elaborated upon.

### Concrete Operational Stage

During the concrete operational stage children attempt to create an equilibrium between themselves and the world around them. More specifically, as children become increasingly more fluent in language, they recognize the differences between themselves and others. This recognition persuades children to discontinue their obsession with self...leaving time and energy for the world around them. As a result, concrete operational children begin to explain and comprehend information at a higher level.

Piaget illustrated concrete operational stage through his test of reversibility. In this test a child is shown two identical glasses containing equal amounts of water and is asked to identify which container has more water. When confronted with this question, both the child in the preoperational and concrete operational stage normally acknowledge that both glasses have equal amounts of

water. In the presence of the child, one of the glasses is then poured into a flat container. When asked again which container is holding more liquid, the child in the preoperational stage will conclude that the tall glass has more water than the flat container. The child in the concrete operational stage, however, will comprehend that both containers have equal amounts of water. Hence, reversibility is demonstrated.

Another process of logical thought demonstrated during the concrete operational stage is conservation. Demonstrated by dropping a sugar cube into a glass of water, the preoperational child thinks the sugar has disappeared, while the concrete operational child understands the sugar has simply changed forms.

Both reversibility and conservation are examples of the cognitive development that transpires during the concrete operational stage. During the next, and final, phase of cognitive development, Piaget's theory explains how early adolescents move from concrete to abstract thinking.

#### Formal Operational Stage

Formal operational thinking "is characterized by the ability to think in a more systematic way, to think of various hypothesis and deduce which one is accurate" (Schickedanz et al., 1998, p. 592). In other words, formal operations allow the child to think in the abstract. For example, if a youngster in this stage were asked to describe what life would be like with one less finger, through the use of deductive reasoning, a logical response could be ascertained.

Piaget was able to test formal operational thinking through an experiment which utilized a pendulum. Subjects were asked to determine what factors or combination of factors influenced the time it took a pendulum to make one full swing. The four factors were: (1) length of the string, (2) size of the weight hanging from the string, (3) height from which the string and weight are released, and (4) force at which the string and weight are released (Schickedanz et al., 1998).

In order to successfully solve this problem, the subject must hold one variable constant while examining the others. Additionally, the subject must combine various factors, in order to deduce the correct answer. Formal operational thinkers are able to think through this problem systematically and

formally, while concrete operational thinkers do not have the maturity to successfully complete such a task.

In addition to cognitive development, adolescents also develop socially and emotionally. Eric Erickson's theory of human development will be reviewed and be used as a theoretical base to explain these affective changes.

### Psycho-Social Theory of Human Development

Eric Erickson's psycho-social theory of human development is an epigenetic theory that describes human development in stages. According to Erickson (1963), humans progress through life in a series of eight stages. Each stage is marked by a crisis that requires resolution if appropriate psycho-social growth is to be accomplished. Dacey (1979) points out, "Erickson uses the term crisis in a medical sense, as an acute period during illness, at the end of which the patient will take a turn for the worse or better" (p. 21). Additionally, Erickson (1963) suggests that all individuals will encounter the stages in the same sequence, but not always at the same time. Table 1 lists the eight stages of human development as proposed by Eric Erickson (1963).

Table 1  
Erickson's Stages of Human Development

Stage	Age	Psychosocial Crisis
1	Infancy 0 - 1.5	Trust versus Mistrust
2	Early Childhood 1.5 - 3	Autonomy versus Shame, Doubt
3	Play Age 3-5	Initiative versus Guilt
4	School Age 5 - 12	Industry versus Inferiority
5	Adolescence 12 - 18	Identity versus Role Confusion
6	Young Adult 18 - 25	Intimacy versus Isolation
7	Adulthood 25-65	Generativity versus Self-absorption
8	Maturity 65+	Integrity versus Despair

According to Erickson (1963), the early adolescent is either at or between stages four or five. Stage Four (Industry versus Inferiority) is a time when youngsters need to accomplish and complete meaningful tasks which lead to an increased self-worth. Miller (1993) notes, "successful experiences give the child a sense of industry, a feeling of competence and mastery, while failure brings a sense of inadequacy, inferiority, a feeling that one is good-for-nothing" (p. 164).



Completion of Stage Four leads to the introduction of Stage Five, Identity versus Role Confusion.

The adolescent in Stage Five will build upon the skills learned in Stage Four in order to make plans for the future. Identity versus Role Confusion is a crisis that affords the adolescent an opportunity to gain self identity by successfully choosing a meaningful career. For those young people who are without vocational direction and purpose, role confusion or self doubt is the negative outcome of Stage Five.

In the following section, Erickson's psycho-social theory of human development will be used as the framework to describe the social and emotional development that occurs during early adolescence.

### Social Domain

At the start of early adolescence, young people begin to look outside the family for "social experiences, companionship, and approval" (Thornburg, 1983, p. 82). This social reprioritization, influences both family and peer relationships.

For the early adolescent, family relationships begin to take on new meanings. Often, youngsters in transition, want to maintain ties with family members while at the same time searching for appropriate levels of autonomy. While attempting to seek independence, conflicts with parents are common. Often, the young pubescent feels imprisoned by the values and guidelines of the parents.

Stereotypically it is believed that early adolescents desire total independence from parents. However, Furman and Buhrmester (1985), concluded that a majority of fifth and sixth grade students look primarily to parents for advice. Their study implies that although adolescents appear to want total independence from parents, in actuality they desire a balance of guidance and autonomy. This healthy equilibrium will make the transition into adulthood smoother.

Peer relationships also take on new meaning during adolescence. Due to physical, cognitive and emotional changes, adolescents "choose friends whose psychological qualities-interests, attitudes, values, and personality- seem to match their own" (Sigelman & Shaffer, 1995, p.377). In an attempt to seek

identity and independence, the early adolescent is pulled toward peers with common interests. These groups are commonly referred to as cliques.

Erickson (1963) theorized that cliques are a direct result of the adolescent's inability to identify an occupation. Erickson (1963) writes, "in most instances, however, it is the inability to settle on an occupation identity which disturbs individual young people. To keep themselves together they temporarily overidentify, to the point of apparent complete loss of identity, with the heroes of cliques and crowds" (p. 262).

Social development during adolescence is influenced by the early adolescents quest for autonomy. In an attempt to seek out independence, young people spend less time with parents, and more time with peers. This social maneuver, however, does not negate the importance or impact parents have on their children.

### Emotional Domain

Emotional development during adolescence is closely tied with development in the physical, cognitive, and social domains. For instance, the body is experiencing physical and mental growth at a surprisingly rapid pace, while simultaneously relationships with friends and family are taking on new meanings. Such sudden change often leave youngsters feeling confused, embarrassed, or frustrated.

During this seemingly difficult time, adolescents are searching to obtain a sense of self (Sigelman & Shaffer, 1995). This search validates Erickson's (1963) claim that "the crisis of adolescence involves establishing a sense of identity" (Schickedanz et al., 1998, p. 592). Erickson taught that psychosocial identity requires individuals to: combine past experiences with future aspirations, question society's values in order to develop one's own, and commit to occupational and other personal goals (Schickedanz et al., 1998).

### Early Adolescence Reviewed

Early adolescence is a unique time in human development. At no other time, are so many changes occurring in the physical, cognitive, social, and emotional realm. Growth spurts, voice changes, sexual maturity, shifts in thinking styles, relational jockeying, and the quest for self identity all illustrate

the incredible change occurring. It is the hope of developmental researchers that the current knowledge regarding early adolescent development will be applied in real life situations. One such application is in the education of early adolescents.

### The Middle School

During the last century, scholars, researchers, and educators have acknowledged the unique physical, cognitive, social, and emotional needs of the early adolescent (Alexander, 1968; Alexander, 1970; Alexander & George, 1981; Alexander & McEwin, 1989; Alexander, Emmett, Compton, Hines, Prescott, & Kealy 1968; CCAD, 1989; Eichhorn, 1966; Manning, 1993). Traditionally, schools have not considered the developmental needs of the pubescent when planning curriculum, programs, or instruction. Because of this negligence, educational success during the transitional years for many students has been marginal. Within the last century a move towards developmentally appropriate educational practices for early adolescents has begun. Although ultimately falling short, the junior high school was the first attempt. Within the last forty years, however, the push has continued through the introduction and implementation of the middle school. Since its conception in 1963 the middle school agenda has been to design developmentally appropriate schools that meet the needs of early adolescents. To understand how the middle school attempts to accomplish this goal, its history and present day status will be discussed.

#### History of the Middle School

During the 1960's the term "middle school" had been used in Europe and in some American private schools, but for the most part it was unfamiliar to most (Lounsbury & Vars, 1978). In 1963, however, the term, "middle school " would be popularized by a man named William M. Alexander. Alexander, a respected scholar and researcher in educational curriculum, was invited by Cornell University, to deliver a keynote address titled, The Dynamic Junior High School. While preparing for his speech, Alexander acknowledged that the junior high school was anything but dynamic. Recognizing that the junior high school, was not meeting the needs of the young adolescent, Alexander decided to alter his speech at Cornell, and use the forum to introduce the middle school. During his

newly rewritten speech, Alexander (1981) confirmed that the 6-3-3 or 8-4 plan was not meeting the needs of young adolescents and recommended the following changes: (a) ninth grade be moved to the senior high and grades five and six be moved up to the middle level, (b) teacher education programs that prepared teachers specifically for teaching the young adolescent, (c) flexible school curriculums that offered courses in general and value education and, (d) implementation of exploratory opportunities for all students. This proposal is most often credited as the beginning of the middle school movement (McEwin, 1992).

In 1966 the movement gained momentum with the publication of Donald H. Eichhorn's book, The Middle School. In his book, Eichhorn, coined the word "transescence" and defined it as "the stage of development which begins prior to the onset of puberty and extends through the early stages of adolescence" (Eichhorn, 1966, p. 3). Eichhorn's work added more credibility to the middle school movement.

The movement would gain further strength when in 1968 Alexander and others wrote, The Emergent Middle School. In it Alexander would define the middle school as "a school providing a program planned for a range of older children, preadolescents, and early adolescents that builds upon the elementary school program for earlier childhood and in turn is built upon by the high school's program for adolescence" (p. 5). Alexander (1968) also summarized the aims of the middle school as (p. 19):

1. To serve the educational needs of the "in-between-agers" (older children, preadolescents, early adolescents) in a school bridging the elementary school for childhood and the high school for adolescence.
2. To provide optimum individualization of curriculum and instruction for a population characterized by great variability.
3. In relation to the foregoing aims, to plan, implement, evaluate, and modify, in a continuing curriculum development program, a curriculum which includes provision for: (a) a planned sequence of concepts in the general education areas; (b) major emphasis on the interests and skills for continued learning; (c) a balanced program of

exploratory experiences and other services for personal development; and (d) appropriate attention to the development of values.

4. To promote continuous progress through and smooth articulation between the several phases and levels of the total educational program.
5. To facilitate the optimum use of personal and facilities available for continuing improvement of schooling.

This publication gave educators a resource that for the first time clearly stated the purpose of the middle school. In fact, Gatewood (1981) refers to this book as “the first really definitive textbook on the middle school” (p. 4).

By the late 1960’s, the middle school movement was well underway. In fact, Alexander reported that in 1968 there were a total of 1,101 such schools as defined by having at least three grades, no more than five grades, and including grades six and seven (Alexander, 1968). The following year that number would increase to 2,298 (Kealy, 1971). Amazingly, the amount of middle schools exploded to 3,723 in 1974 and 4,060 in 1977 (Brooks & Edwards as cited in McEwin, 1983). Although the numbers were changing, the mission had not. From its birth the middle school movement had been guided by the premise that early adolescence is a unique period of human development and schools needed to design programs, curriculum, and instruction accordingly.

### The Middle School Today

Recently, the movement gained further momentum when in 1989 the Carnegie Council on Adolescence Development published a report titled, Turning Points: Preparing American youth for the 21st century. The report verified the uniqueness of early adolescence and offered the following recommendations for middle grade schools (p. 9):

1. Create small communities for learning where stable, close, mutually respectful relationships with adults and peers are considered fundamental for intellectual development and personal growth.
2. Teach a core academic program that results in students who are literate, including in the sciences, and who know how to think

critically, lead a healthy life, behave ethically, and assume the responsibilities of citizenship in a pluralistic society.

3. Ensure success for all students through elimination of tracking by achievement level and promotion of cooperative learning, flexibility in arranging instructional time, and adequate resources (time, space, equipment, and materials) for teachers.
4. Empower teachers and administrators to make decisions about the experiences of middle grade students through creative control by teachers over the instructional program linked to greater responsibilities for students' performance.
5. Staff middle grade schools with teachers who are expert at teaching young adolescents and who have been specially prepared for assignment to the middle grades.
6. Improve academic performance through fostering the health and fitness of young adolescents, by providing a health coordinator in every middle grade school.
7. Re-engage families in the education of young adolescents by giving families meaningful roles in school governance, communicating with families about the school program and student's progress, and offering families opportunities to support the learning process at home and at the school.
8. Connect school with communities, which together share responsibility for each middle grade student's success.

Continued support came in 1992 when the National Middle School Association published a position paper entitled, This We Believe. The document was recently revised in 1995, but its message remained the same. Schools that meet the needs of young adolescents are characterized by (p. 11):

1. Educators committed to young adolescents.
2. A shared vision.
3. High expectations for all.
4. An adult advocate for every student.
5. Family and community partnerships.
6. A positive school climate.

Therefore, a developmentally responsive middle school would provide the following:

1. Curriculum that is challenging, integrative, and exploratory.
2. Varied teaching and learning approaches.
3. Assessment and evaluation that promote learning.
4. Flexible organizational structures.
5. Programs and policies that foster health, wellness, and safety.
6. Comprehensive guidance and support services.

Both of these documents support the concept of designing schools specifically to meet the needs of early adolescents. Integrative curriculums, exploratory opportunities, cooperative learning, authentic assessment, flexible scheduling, and team teaching are just a few of the implementations the middle school utilizes in order to successfully meet its goal.

#### Middle School Physical Education

Since its conception, the middle school movement has always acknowledged the importance of physical education in the middle school curriculum (Alexander & George, 1981; Alexander et al., 1968; Eichhorn, 1966). Middle school pioneers John H. Lounsbury and Gordon F. Vars (1978) write “the marked physical growth of young people during the middle school years, together with attendant health concerns, have earned this area a firm place in any middle school curriculum” (p. 83).

Limited research, however, has made it difficult to assess just how and if physical education is contributing to the middle school curriculum. Nonetheless, utilizing what little research has been done, a current snapshot of middle school physical education has been developed.

#### The Status of Middle School Physical Education in the United States

In 1985 Ross, Dotson, Gilbert and Katz published the results of the National Children and Youth Fitness Study (NCYFS). The purpose of that study was to “describe the status of school physical education programs” (p.31).

Results showed the majority (93.08%) of students in grades six through eight reported enrollment in physical education. Physical education enrollment, however, declined between grades six and eight. Most (35.3%) students in the

middle grades had physical education five days per week. Additionally, some students participated in physical education four days a week (7.56%), three days a week (11.53%), five days in two weeks (7.06%), two days in one week (22.03%), one day a week (7.8%), or none at all (6.92%).

The NCYFS also examined the amount of time allotted for physical activity during physical education class. Researchers determined this by multiplying the number of class meetings per week by the class length in minutes, while subtracting the time spent on changing clothes or showering. The results showed that in the lower grades, where enrollment was high, time for activity was low. In contrast, in the upper grades where enrollment was low, time for activity was high. Relative to middle level grades, 54.6% of students in grades five and six received an hour and a half or less of actual time for physical activity during physical education per week.

The NCYFS also ranked the fifteen most prevalent activities in physical education. For boys in grades seven through nine the top five, in descending order were basketball, calisthenics/exercises, baseball/softball, touch football, and jogging. For girls in the same grades, the top five were basketball, calisthenics/exercises, volleyball, jogging, and baseball/softball.

More recently, Pate, Small, Ross, Young, Flint, and Warren (1995) conducted the School Health Policies and Programs Study (SHPPS). The SHPPS attempted to describe the status of K-12 physical education by surveying administrators and teachers at the state, district, and local levels. The SHPPS reported that required physical education varied with each middle/junior high school, however 46.8% of schools surveyed required at least three years, 23.5% required two years, 19.9% required one year and 5.1% required less than one year.

The frequency of class meetings also fluctuated from one school to another. Results showed that nearly half (45.4%) of the physical education classes met five days a week. Additionally, 6.2% met four days a week, 9.2% three days a week, 12.9% five days in two weeks, 13.9% two days a week, and 3.8% one day a week.



Most (89.1%) middle/junior high schools allow students to be excused from physical education. Of those granted exemption, 29.6% are excused in order to participate in other activities (e.g. athletics, band, chorus).

Finally, results of the SHPPS indicate that class size in most (84.4%) middle/junior high school physical education classes is 35 or fewer students with 32.4% of all class sizes ranging from 20-25 students.

In quantifying the credentials of middle school physical education teachers, the Shape of the Nation Report (NASPE, 1997) concluded that middle school physical education is taught by specialists in 38 states, certified physical education specialists, along with classroom teachers in 11 states, and certified physical education specialists with physical education aides in just one state.

In summary, the descriptive reports just examined, indicate that most middle school students are enrolled in physical education. Enrollment, however, appears to decline with each passing grade. Instruction is usually centered around team sports and physical education instructors are normally certified specialist. In the next section, the concept of attitude will be examined, followed by an analysis of student attitudes toward physical education.

### The Concept of Attitudes

The study of attitudes began in social psychology during the early part of the twentieth century. From the beginning the study of attitudes has been "characterized by an embarrassing degree of ambiguity and confusion" (Fishbein and Ajzen, 1975, p. 1). One of the earliest definitions came in 1928 when Louis Thurstone defined attitude as the "sum total of a man's inclinations and feelings, prejudice or bias, preconceived notions, ideas, fears, threats, and convictions about any specific topic" (p. 531). Thurstone (1931) later shortened his definition to simply say "attitude is the affect for or against a psychological object" (p. 261). Shortly thereafter, Gordon W. Allport (1935) defined attitudes as, " a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (p. 810). Halloran (1967, p.14) points out that Allport's definition raises three points:

First, an attitude is a state of readiness leading the individual to

perceive things and people around him in certain ways; that is to be more ready with certain categories and interpretations than with others. In their everyday lives people are often 'ready' to deal with objects and people as they meet them without having to 'stop and think' about every encounter. Secondly, attitudes are not innate—they are learned, they develop and they are organized through experience. These states of readiness are relatively enduring but they are modifiable and subject to change. A third aspect of Allport's definition follows from this and that is that attitudes are dynamic. Attitudes are not merely latent states of preparedness awaiting the presentation of an appropriate object for their activation. They have motivational qualities and can lead a person to seek (or avoid) the objects about which they are organized.

Influenced by Allport's definition, Triandis (1971, p. 2), defined attitude as, "an idea charged with emotion which predisposes a class of actions to a particular class of social situations." Triandis (1971) suggests that attitudes consist of three components: (a) a cognitive component, which is a way for humans to categorize ideas, (b) an affective component, which is the emotion that charges the idea, and (c) a behavioral component, which guides behavior.

As Mueller (1986) points out "while there is not total consensus among social scientists regarding the definition of attitude, there is substantial agreement that affect for or against is a critical component of the attitude concept" (p. 2). Ironically, this was precisely what Louis Thurstone proposed in his modified definition in 1931.

Although the debate over the definition of attitude continues, most if not all social psychologists acknowledge the importance of attitudes in the lives of human beings. According to Katz (1960) attitudes serve people in four ways. First, attitudes guide behavior toward valued goals and away from aversive events. Secondly, attitudes help to manage and simplify information. Thirdly, attitudes allow people to communicate information about their personality and values. And lastly, attitudes protect people from unacceptable or threatening thoughts, urges, and impulses.

The link between attitudes and behavior has received much attention. Many agree that attitudes are influential in behavior, however it is theorized that

this relationship is not singular, but rather multidimensional. Biddle and Chatzisarantis (1999) write:

In predicting behavior, attitudes are only part of a more complex decision-making process where other factors can also be of influence. Values, beliefs, perceptions of control, and intentions moderate attitude-behavior relationships. Specifically, attitudes cannot determine behavior unless they lead to the development of intentions (p. 9).

In explaining the relationship between attitudes, intentions, and future behavior Ajzen and Fishbein (1980) have developed the theory of reasoned action. This theory asserts that action is determined by intention which is influenced by attitudes and social norms. Attitudes are influenced by beliefs and values, and social norms are influenced by the beliefs of significant others and the motivation to comply with the beliefs of others. The theory of reasoned action posits that the interplay of all these variables are what guide behavior.

Since it is believed that attitudes do influence behavior, researchers in the field of physical education have historically examined student attitudes toward physical education in the hopes of enhancing student interest in physical education and physical activity. A summary of those reports will follow.

#### Student Attitudes Toward Physical Education

The field of physical education has had a long history of investigating student attitudes toward physical education. Many of the early studies examined the attitudes of college students. In recent times, more attention has been given to the attitudes of secondary students. Of these studies only a few have sampled middle or junior high school students. Nevertheless, below is a review of the research dealing with student attitudes toward physical education and the factors that influence those attitudes. The literature has been divided into three sections based on the academic level of the sample. Studies examining college students' attitudes toward physical education will come first, followed by the research which sampled only high school students, concluded by the literature that sampled students from the junior high/middle school or intermediate school levels. The section focusing on college students will be limited to those

studies that attempted to link at least one aspect of high school physical education as a factor influencing attitudes toward college physical education

### College Students

Mabel Alden (1932) conducted one of the earliest studies examining college students' attitudes toward physical education. Interested in determining the factors, which inhibit motor skill development in physical education, Alden examined unfavorable attitudes of college women in regard to required physical education programs. Data was collected through the utilization of a checklist given to 300 women in three different universities. Alden concluded that the top five factors which contributed to negative attitudes toward physical education were (1) inconvenience of dressing and undressing, (2) not enough time for dressing which led to a feeling of untidiness, (3) failure of the secondary school to provide adequate skills, (4) not enough class time to develop skills, and (5) lack of interest in class activities.

Concerned with the decrease in physical education enrollment, Bullock and Alden (1933) investigated the factors that were causing an unfavorable reaction to physical education. A questionnaire was administered to 192 freshman women. Results showed that of those sampled 63.6% liked physical education and 36.4% disliked it. Interestingly many of the students who disliked physical education, were previously taught by an untrained high school physical education teacher.

Brumbach and Cross (1965) "measured the attitude toward physical education of all the male lower division students entering the University of Oregon in September 1960" (p. 10) and found a positive relationship between the number of years in which students were enrolled in high school physical education and positive attitudes toward college physical education. The study also reported a positive relationship between size of high school and attitude towards college physical education. This latter point, however, was refuted by Campbell (1968), in a study examining the attitudes of 199 college males.

Most recently, Figley (1985) was interested in determining what specific aspects of previous physical education experiences led to positive and negative attitudes toward physical education. Utilizing the critical incident technique

(Flanagan, 1954), 100 college students were asked to reflect upon their physical education experience and list all the aspects which led to positive and negative attitudes toward physical education. Results indicated teacher behavior, curriculum content, and class atmosphere were the top three determinants associated with both positive and negative attitudes.

### High School Students

Influenced by the attitude research conducted on college students, Martha G. Carr (1945) was interested in determining "the relationship between success in physical education and selected attitudes of high school freshman girls" (p. 176). Administering a questionnaire and skills test to 335 subjects, Carr concluded that attitudes towards physical education did influence student success in physical education. Although this study is not without its methodological flaws (e.g. did the students have a positive attitude towards physical education or physical activity which led to success in physical education), it still set the groundwork for later research.

Several years after Carr's work, researchers in Ontario, Canada, became alarmed over the decrease in physical activity among young adults and adolescents. Looking towards physical education as a logical starting point to combat these trends, investigators were interested in determining why students enrolled or did not enroll in physical education. Distributing a questionnaire to 645 students, the research team of Earl and Stennett (1987) found that liking the activity, liking sports, fitness benefits, enjoyment, and the acquisition of new skills were the reasons why students voluntarily took physical education. Reasons for not taking physical education included: not as important as other subjects, poor program, scheduling conflict, receiving enough exercise outside of school, and uneasiness of getting sweaty and having to attend other classes throughout the day.

Rice (1988) concerned over the inappropriate curriculum that was commonplace in many high school physical education programs, inquired into the attitudes of high school students toward personal health and fitness, physical education curriculum, and physical education teachers. After administering a questionnaire to 602 students, Rice reported that 85% of the students sampled

enjoyed physical education and 73% considered their physical education teacher to be a good role model.

Research on high school students attitudes toward physical education was further propelled by the team of Luke and Sinclair (1991). Concerned over the decrease in physical activity among adolescents, these investigators studied the attitudes of males and females who elected to enroll in physical education, and males and females who elected not to enroll in physical education. Applying the critical incident form (Flanagan, 1954) to 488 students, the researchers concluded that for all subgroups curriculum content, class atmosphere, and self-perception were the top three determinants of positive attitudes. Interestingly, curriculum content and teacher behavior were the top two determinants of negative attitudes.

More recently, Tannehill, Romar, O'sullivan, England, and Rosenberg (1994) studied student and parent attitudes toward physical education. Survey results from 314 students, showed that successful outcomes (e.g. successfully making a basket) were most responsible for promoting positive attitudes, while relationships (e.g. being put down by other students) were most responsible for producing negative attitudes.

#### Junior High School/Middle School Students

Interested in identifying specific annoyances that lead students to have negative attitudes toward physical education, Edward Nemson (1949) studied 323 senior and junior high school boys. Results from a questionnaire indicated that the boys who were described by their teacher as having a positive attitude towards physical education were most irritated by the personal hygiene of the physical education teacher (e.g. tobacco on the breath of the teacher). Boys who were categorized as having a poor attitude by their teacher were most annoyed with the requirement to take physical education.

Middle school student attitudes toward physical education was again examined by Tannehill and Zakrajsek (1993) in a study which sampled middle and high school students. Results indicated that 57% of those surveyed reported that physical education was an important part of their education, whereas 43% indicated it was of no importance. Researchers also asked students to identify

positive and negative personal experiences associated with physical education. Positive experiences included: winning, success, performing well, being included, teamwork, participating, and having fun. Negative experiences included fitness exercises and injuries.

Carlson (1994) examined why junior high and high school students hate, tolerate, or love physical education. Results showed that of the 100 junior high school students sampled, 51% had positive attitudes towards physical education. Factors which influenced these attitudes included aspects relating to culture (gender, idolization of elite sports figures, body and mind compartmentalization), society (family, mass media, sporting experience and skill level, peers, previous physical education experiences, and perceptions of fitness), and school (teacher influence).

In the same year, Margaret King examined the attitudes of intermediate school students (grades 7-9) from St. John's, Newfoundland. Through the utilization of a questionnaire, results from a sample size of 726 indicated that the attitudes of younger female students were more positive than their male counterparts. As students increased in age, however, the opposite held true. The strongest factor contributing to student attitudes toward physical education was the perceived status of physical education.

Additional research in 1995 attempted to "describe and analyze what students think, feel, and know about various aspects of their physical education programs" (Graham, 1995a, p. 364). Carlson (1995) found that 21% of junior high school students sampled, strongly disagreed with the statement, "I enjoy gym class." Reasons for discontentment included: subject matter lacked personal meaning, perceived lack of ability, public display of athletic inadequacy, uneasiness with competition, and feelings of isolation. Furthermore, Portman (1995) studied the physical education experience through the eyes of unskilled sixth-graders. For the sample studied physical education was an unhappy experience which led to feelings of isolation, embarrassment, and humiliation.

### Summary

The review of literature just presented provided the background information which served as the foundation for this current study. Section one

discussed the development that occurs during early adolescence in the physical, cognitive, social, and emotional domains. Section two described the history and philosophy of the middle school and how it attempts to meet the specific needs of the early adolescent. Section three analyzed the status of middle school physical education in the United States. Section four reviewed the global concept of attitude, and section five examined student attitudes toward physical education.

The following chapter on methodology describes the critical incident technique as applied to this study, explains the development of the survey instrument used in this study, provides results of a recent pilot study, and details the procedures used for final sample selection, data collection and data analysis.



## CHAPTER 3 METHODOLOGY

The purpose of this study was to investigate middle school students' attitudes toward a physical education program and the factors which contribute to those attitudes. This chapter describes the critical incident technique as applied to this study, outlines the development of the survey instrument used for this study, provides the results of a recent pilot study in which the survey instrument was used, discusses the setting from which the final sample was drawn, outlines the procedures used for sample selection and data collection, and describes the statistical analysis that was employed on the collected data.

### The Critical Incident Technique

The critical incident technique "consists of a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles" (Flanagan, 1954, p. 327). The critical incident technique procedure begins by locating and questioning those individuals most involved with a given phenomenon under investigation. Once a specific group has been targeted, those individuals are requested to describe all the incidents that they have experienced in relation to the specific phenomenon under investigation. For example, if a corporation were interested in enhancing employee job satisfaction, they could send out a critical incident form to all employees requesting them to cite all work related incidents that have caused job satisfaction and dissatisfaction. These recorded incidents could then be categorized, totaled and in some cases used to invoke change.

Early research using the critical incident technique was undertaken by the United States Army Air Forces for the purpose of evaluating flight instruction. The method was later used by the military in their investigation of what enlisted soldiers expected from their commanding officers. Within a few years, the critical incident technique was being used by industry interested in identifying the personal qualities subordinates desired in their supervisors. Throughout its existence, the critical incident technique has always been used as a means to

gather information directly from subjects who are closely related to the issue at hand (Flanagan, 1954).

In recent times, the critical incident technique has been used by physical education researchers in attempting to discover student attitudes toward physical education (Figley, 1985; Luke & Sinclair, 1991). Since the intent of this study was to discover middle school students' attitudes toward a physical education program, and the factors which contribute to those attitudes, the critical incident technique was employed for this study as well.

### Instrument Development

The Middle School Physical Education Critical Incident Survey [MSPECIS] (Appendix A) was developed by the researcher to collect data for this study. The MSPECIS is adapted from the instrument designed by Moria D. Luke and Gary D. Sinclair (1991) in their study of high school students' attitudes toward physical education.

The MSPECIS contains two parts. Part one gathered general demographic information (e.g. grade, gender). Additionally part one requested that subjects respond to the following question, "If physical education was optional next year, would you choose to take it?"

Part two of the MSPECIS contains the critical incident report form. The form requested that students record all the events that they had experienced during middle school physical education that caused them to like or dislike physical education. In the following section results from the initial pilot study using the MSPECIS will be described.

### Pilot Study

The purpose of the pilot study was to determine (1) if problems existed with the wording of the preliminary survey instructions that were read to the subjects by the researcher (2) if problems existed within the wording of the MSPECIS (3) the time needed to complete the survey and (4) if the survey was capturing the information needed to successfully answer the respective research questions for this study.

With this in mind, a pilot study was conducted at Cornerstone Middle School (pseudonym) located in the southeastern region of the United States. Participating sixth (n=23), seventh (n=29), and eighth (n=24) grade students were given the MSPECIS during one health and physical education class.

### Pilot Study Results

As a result of the pilot study it was discovered that the initial instructions recited to the participants needed to be reworded because the responses to the MSPECIS were more comprehensive when subjects were reminded of the various aspects of physical education (i.e. curriculum content, teacher behavior, peer interaction) during the preliminary instructions. This discovery led to the rewording of the preliminary survey instructions (Appendix B).

The average completion time was 25 minutes. Of the 76 subjects, only two requested clarification regarding a question on the MSPECIS. Therefore, it was concluded that the survey was clear and understandable for the preponderance of the middle school students in the pilot study.

The final goal of the pilot study was to determine if the MSPECIS uncovered responses that could potentially answer the prospective research questions. To address this question the data was coded and analyzed according to gender, grade, and student choice to enroll or not to enroll in physical education. Results indicated that the collected data provided the necessary information required to answer the research questions proposed in this study.

Based on this pilot, the procedures for the actual study were finalized. In the following sections, a description of the subjects used for this study and the physical education program in which they attend will be presented. Subsequently, the procedures used for sample selection, data collection and data analysis will be offered.

### Description of Subjects and Setting

The subjects for this study came from Cornerstone Middle School (pseudonym) located in a suburban community in the southeastern region of the United States. Cornerstone Middle School had a student population of 876 as of December 14, 1998 (Table 2).

Table 2  
Enrollment Summary

Grade	Male	Female	Total
6	136	142	278
7	164	128	292
8	158	148	306
Totals	458	418	876

Students are primarily white and middle class with minorities accounting for 4.5% of the student body. Seventeen percent of the students live in single parent families. Twenty-eight percent of the students spend time alone after school, while seventeen percent spend time with their siblings. School attendance is consistent and stable as exemplified by the 95.6% daily attendance average for the 1997-1998 school year. Approximately seven percent of the students are identified as gifted and approximately twenty-four percent are identified as "at-risk" (J. E. Williams, personal communication, November 16, 1998).

Like most middle schools, Cornerstone attempts to provide each student with a balanced, well rounded educational experience. To this end health and physical education is a three year requirement for all students. It is taught daily with time allocated for both health and physical education. The content taught in the physical education curriculum consists mainly of team sports, individual/dual activities, rhythms/dance, and fitness (Table 3).

Table 3

Health and Physical Education Scope Chart

Weeks	Sixth Grade	Seventh Grade	Eighth Grade
1-9	Orientation/ Fitness (6 days) Soccer (8-10 days) Track and field (8-10 days) Throwing and catching (3-4 days) Flag football (3-4 days) Fitness games (3-4 days) *Fitness principles (10 days)	Orientation/ Fitness (6 days) Soccer (8-10 days) Track and field (8-10 days) Tennis (3-4 days) Flag football (3-4 days) Team handball (3-4 days) *Fitness principles (10 days)	Orientation/ Fitness (6 days) Soccer (8-10 days) Track and field (8-10 days) Tennis (3-4 days) Archery (3-4 days) Golf (3-4 days) *Fitness principles (10 days)
10-18	Basketball (8-10 days) Line dancing/ wrestling/ paddle games (16-20 days) Weight and circuit training/ aerobics (4-5 days) *Body care (6-8 days) *Disabilities (6-8 days) *Sexuality Education (8 days)	Basketball (8-10 days) Line dancing/ wrestling/ paddle games (16-20 days) Weight and circuit training/ aerobics (4-5 days) *Digestive system (6-8 days) *Respiratory system (6-8 days) *Sexuality Education (8 days)	Basketball (8-10 days) Line dancing/ wrestling/ paddle games (16-20 days) Weight and circuit training/ aerobics (4-5 days) *Circulatory System (12-17 days) *Sexuality Education (8 days)
19-27	Volleyball (8-10 days) Striking skills (8-10 days) Games/ relays (4-5 days) *The family (5 days) *Emotional/ mental health (5 days) *Safety education (10 days) *Chemical use/ abuse (5 days)	Volleyball (8-10 days) Badminton (4-5 days) Table tennis (4-5 days) Fitness activities (4-5 days) *Endocrine system (6-8 days) *Peer relations (6-8 days) *DARE (10 days)	Volleyball (8-10 days) Badminton (4-5 days) Table tennis (4-5 days) Fitness activities (4-5 days) *Skeletal system (10-15 days) *Muscular system (10-15 days)

Table 3

Health and Physical Education Scope Chart (cont.)

Weeks	Sixth Grade	Seventh Grade	Eighth Grade
28-36	Softball (8-10 days) Throwing and catching (3-4 days) Flag football (3-4 days) Fitness activities (3-4 days) Games/relays (3-6 days) Group games (8-10 days) *Eyes/ears (10 days)	Softball (8-10 days) Team handball (4-5 days) Flag football (4-5 days) Fitness activities (4-5 days) Choice program (8-10 days) *Drugs/alcohol/tobacco (10 days)	Softball (8-10 days) Team handball (4-5 days) Lacrosse (4-5 days) Fitness activities (3-5 days) Choice program (8-10 days) *First aid (10 days)

\*Part of the health curriculum

With the exception of sexuality education, which is taught as part of the health curriculum, all health and physical education classes are coeducational and are 45 minutes in length. When students are in physical education class they are allotted 4 minutes for changing into or out of the physical education uniform.

Each class is structured so that once students finish dressing, they then gather in the large gymnasium for roll call, stretching, and warm up activities. Warm-ups normally consist of running, but occasionally include games and relays. At the conclusion of warm-ups, students begin their daily lesson with their respective teacher.

The health and physical education staff at Cornerstone Middle School consists of four female and three male teachers. All of the teachers are full time with the exception of one, who also is employed as the athletic trainer at the local high school. Between these teachers 33 sections of health and physical education are taught. The average class size per section is 27 students. Each instructor (with the exception of the one part time teacher), teaches all three grades. In addition, the entire staff teaches both the health and physical education curriculum to their respective class.

The physical education facilities at Cornerstone include the following: a large gymnasium, auxiliary gymnasium, weight room which includes free weights, fitness room which includes six stationary bikes, three tread mills, and a universal weight system, two large open fields, one softball diamond, one baseball diamond, six tennis courts, and a track.

### Sample Selection

With the exception of those subjects who were involved in the pilot test of MSPECIS, all students attending Cornerstone Middle School were invited to participate in this study. The researcher personally visited each physical education class (n=9 sixth grade classes, n=10 seventh grade classes, n=11 eighth grade classes) and invited each student within each class to participate in the study. In all, 124 sixth grade students (n=47 males, 77 females), 112 seventh grade students (n=57 males, 55 females), and 112 eighth grade students (n=46 males, n=66 females) returned the parental consent form and participated in this study. The overall response rate was 43.9%.

### Data Collection

Before the collection of data began, permission to conduct the study was requested and granted by the Institutional Review Board (IRB) for Research Involving Human Subjects (Appendix C), county superintendent who presided over Cornerstone Middle School (Appendix D), principal of Cornerstone Middle School (Appendix E), and the physical education teachers of Cornerstone Middle School (Appendix F). Consent was also requested and granted by the parents of all participants (Appendix G).

The collection of data took place over a two week period. During that time, participating subjects were pulled out of either health or physical education class and sent to a large auditorium to complete the MSPECIS. Once inside the auditorium, the subjects were provided with a student assent form (Appendix H). Shortly thereafter the preliminary survey instructions (Appendix B) were read. Students were then given a copy of the MSPECIS. Completed surveys were collected simultaneously.

### Validity and Reliability

The investigator and two physical education teacher educators individually analyzed and classified 60 randomly selected incidents. The agreement of the two teacher educators with the investigator was .85, which established the validity of the classification system. A reliability score of .96 was established when the investigator classified 60 randomly selected incidents on two separate occasions.

### Data Analysis

Following data collection, all of the events that the students recorded were classified into meaningful categories. These categories were "determined through a content analysis process in which the words and phrases used by the students were grouped into [subcategories], which were subsequently grouped into larger units, or major categories" (Luke and Sinclair, 1991, p. 33). For instance, if a student recorded "playing soccer" as one event that caused him/her to like physical education, then "playing soccer" fell under the subcategory of team sports. Once all of the student comments were categorized into subcategories, all of the subcategories were "subsequently grouped into larger units, or major categories" (Luke and Sinclair, 1991, p. 33). For example, the subcategory "team sports" was classified within the major category of "curriculum".

In all the subcategories were grouped within one of six major categories: curriculum content (e.g. team sports, individual or dual sports, long runs), teacher behavior (e.g. personal qualities, style, management), student self-perceptions (e.g. competence, confidence, interest), class atmosphere (e.g. enjoyable, sexist, sociable), dressing out (e.g. changing clothes, uniform style, allotted time for changing) or other (e.g. facilities, injuries, class leagues).

Once the student responses were classified, the major and subcategories were analyzed with descriptive statistics and reported by rank, frequency and percentage.

### Summary

In this chapter the process that was employed in this study on middle school students' attitudes toward physical education has been detailed. More



specifically it has described the critical incident technique as it applied to this study, explained the process involved in developing the survey instrument, provided results of a recent pilot study in which that instrument was utilized, discussed the setting from which the sample for this study was drawn, outlined the procedures used for sample selection and data collection, and described the analysis that was employed on the collected data. The presentation of the collected data will be offered in the following chapter.

## CHAPTER 4 PRESENTATION OF DATA

The purpose of this study was to investigate middle school students' attitudes toward a physical education program and the factors which contributed to those attitudes. The critical incident technique was used to discover the experiences of students during middle school physical education which caused them to like and dislike physical education. The data were divided into six major categories and then into subcategories and analyzed according to grade level, gender, and students' choice to enroll in physical education if it were optional. The presentation of this data is provided in this chapter.

### Presentation of Sixth Grade Data

The sixth grade sample was 124 subjects (n=47 male, n=77 female). In response to the hypothetical question, "If physical education was an option next year, would you choose to take it?", 87.2% (n=41) of all males and 72.7% (n=56) of all females answered affirmatively (Table 4).

Table 4

#### Composition of Sixth Grade Sample: Frequency and Percentage

Group	N	% gender	% total group
Males electing to take PE	41	87.2	33.1
Males electing not to take PE	6	12.8	4.8
Females electing to take PE	56	72.7	45.2
Females electing not to take PE	21	27.3	16.9

#### Sixth Grade Major Categories

Subjects were asked to record all the incidents that they experienced during middle school physical education which caused them to like and dislike physical education. The incidents were categorized into major and subcategories. The six major categories were class atmosphere, curriculum, dressing out, self-perception, teacher behavior, and other.

Overall, the top ranked major category associated with positive incidents for all sixth grade groups (males choosing to take physical education, males choosing not to take physical education, females choosing to take physical education, and females choosing not to take physical education) was curriculum. For the sixth grade boys in this study, curriculum was followed by self-perception (e.g. interest, competence) and class atmosphere (e.g. enjoyable, sociable). The second ranked major category for all females was class atmosphere. This was followed by teacher behavior (e.g. discipline, style) for females electing to enroll in physical education and self-perception for females electing not to enroll in physical education (Table 5).

Table 5

Rank Order of Major Categories Related to Positive Incidents

Sixth Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Self-perception	2	2	4	3	4
Atmosphere	3	3	2	2	2
Other	4	--	6	5	5
Teacher	5	--	3	4	3
Dressing out	--	--	5	6	6

The top ranked major category related to negative incidents for all sixth grade groups were also issues related to the physical education curriculum. This was followed by teacher behavior and dressing out for all males. For females, dressing out was ranked second, followed by teacher behavior for females electing to take physical education and class atmosphere for females electing not to take physical education (Table 6).

Table 6

Rank Order of Major Categories Related to Negative IncidentsSixth Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Teacher	2	2	3	4	3
Dressing out	3	3	2	2	2
Atmosphere	4	3	4	3	4
Other	5	--	5	6	5
Self-perception	6	--	6	5	5

As previously mentioned curriculum was the top ranked major category associated with positive incidents. Specifically, it accounted for 72.6% of the responses given by males and 56.3% by females. It was followed by self-perception (9.8%) and atmosphere (7.9%) for males and atmosphere (23.1%) and teacher behavior (8.9%) for females (Tables 7 and 8).

Table 7

Total Positive Incidents ReportedSixth Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	106	71.6	13	81.3	119	72.6
Self-perception	14	9.5	2	12.5	16	9.8
Atmosphere	12	8.1	1	6.2	13	7.9
Other	9	6.1	--	--	9	5.4
Teacher	7	4.7	--	--	7	4.3
Dressing out	--	--	--	--	--	0.0
Total	148		16		164	

Table 8  
Total Positive Incidents Reported  
Sixth Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	184	55.4	62	59.0	246	56.3
Atmosphere	76	22.9	25	23.8	101	23.1
Teacher	34	10.2	5	4.8	39	8.9
Self-perception	20	6.0	8	7.6	28	6.4
Dressing out	10	3.0	1	.9	11	2.5
Other	8	2.4	4	3.8	12	2.7
Total	332		105		437	

Curriculum was also the top ranked major category for all groups in relation to negative incidents. It accounted for 58.7% of the responses given by males and 41.3% by females. It was followed by teacher behavior (13.0%) and dressing out (9.8%) for males (Table 9) and dressing out (25.1%) and teacher behavior (12.1%) for females (Table 10).

Table 9  
Total Negative Incidents Reported  
Sixth Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	46	58.2	8	61.5	54	58.7
Teacher	9	11.4	3	23.1	12	13.0
Dressing out	8	10.1	1	7.7	9	9.8
Atmosphere	7	8.9	1	7.7	8	8.7
Other	6	7.6	--	--	6	6.5
Self-perception	3	3.8	--	--	3	3.3
Total	79		13		92	

Table 10  
Total Negative Incidents Reported  
Sixth Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	60	36.4	47	50.0	107	41.3
Dressing out	44	26.7	21	22.3	65	25.1
Teacher	24	14.5	7	7.4	31	12.0
Atmosphere	14	8.5	11	11.7	25	9.6
Other	12	7.3	2	2.1	14	5.4
Self-perception	11	6.6	6	6.4	17	6.6
Total	165		94		259	

#### Sixth Grade Subcategories

Subcategories within each major category were also identified for each group. The presentation of subcategories will begin with sixth grade males who would elect to enroll in physical education. This group most often cited team

sports (31.1%) and individual and dual sports (14.2 %) as positive incidents associated with physical education. These were followed by extrinsic awards which accounted for 4.1% of the reported incidents (Table 11).

Table 11  
Positive Incidents by Subcategories  
Sixth Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (13)	1	Team sports	46	31.1
	2	Indiv. / dual sports	21	14.2
	3	Games	14	9.4
	4	Sports	6	4.1
Self-perception (5)	1	Interest	5	3.4
	1	Health	5	3.4
Atmosphere (5)	1	Sociable	1	.7
	2	Freedom	1	.7
Other (3)	1	Extrinsic Rewards	6	4.1
	2	Outside	2	1.4
Teacher (4)	1	Personal qualities	3	2.0
Dressing out (0)	--	--	--	--

Sixth grade males who would elect not to enroll in physical education most often cited individual and dual sports (31.3%), team sports (25.0 %), and health benefits (12.5%) as positive physical education incidents (Table 12).

Table 12  
Positive Incidents by Subcategories  
Sixth Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (5)	1	Indiv./ dual sports	5	31.3
	2	Team sports	4	25.0
	3	Fitness Conditioning	3	18.8
	4	Games	1	6.3
Self-perception (5)	1	Health	2	12.5
Atmosphere (5)	1	Sociable	1	6.3
Teacher (0)	--	--	--	--
Dressing out (0)	--	--	--	--
Other (0)	--	--	--	--

Sixth grade females who would choose to enroll in physical education most often cited items related to team sports (20.2%) as positive incidents associated with physical education. These were followed by a sociable (9.3%) and enjoyable (8.4%) class atmosphere (Table 13).



Table 13  
Positive Incidents by Subcategories  
Sixth Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (21)	1	Team sports	67	20.2
	2	Indiv./dual sports	29	8.7
	3	Games	20	6.0
	4	Fitness Conditioning	14	4.2
Atmosphere (7)	1	Sociable	31	9.3
	2	Enjoyable	28	8.4
	3	Competitive	7	2.1
	4	Relaxing	6	1.8
Teacher (6)	1	Personal Qualities	20	6.0
	2	Style	6	1.8
Self-perception (3)	1	Interest	9	2.7
	2	Health	7	2.1
Dressing out (3)	1	Changing	6	1.8
	2	Locker room	2	.6
Other (3)	1	Outside	6	1.8
	2	Extrinsic rewards	1	.3

The subcategory associated most often with positive incidents by sixth grade females who would choose not to enroll in physical education was team sports (21.0%). It was followed by a class atmosphere that was sociable (15.2%) and individual and dual sports (10.5%) related activities (Table 14).

Table 14  
Positive Incidents by Subcategories  
Sixth Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (14)	1	Team sports	22	21.0
	2	Indiv./dual sports	11	10.5
	3	Fitness Conditioning	7	6.7
	4	Games	6	5.7
Atmosphere (4)	1	Sociable	16	15.2
	2	Enjoyable	4	3.8
Self-perception (4)	1	Interest	4	3.8
	2	Health	2	1.9
Teacher (2)	1	Personal qualities	4	3.8
	2	Management	1	1.0
Other (2)	1	Outside	3	2.9
	2	Extrinsic rewards	1	1.0
Dressing out (1)	1	Locker rooms	1	1.0

For sixth grade males who would elect to enroll in physical education warm-up running (19.0%), individual and dual sports (11.4%), and teacher personal qualities (8.9%) were the most common subcategories associated with disliking physical education (Table 15).

Table 15  
Negative Incidents by Subcategories  
Sixth Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (10)	1	Warm-up running	15	19.0
	2	Indiv./ dual sports	9	11.4
	3	Mile run	8	10.2
	4	Team sports	6	7.6
Teacher (3)	1	Personal qualities	7	8.9
	2	Discipline	1	1.3
Dressing out (3)	1	Locker room	4	5.1
	2	Changing time	2	2.5
Atmosphere (4)	1	Peer conflict	3	3.8
	2	Misbehavior	2	2.5
Other (3)	1	Injury	2	2.5
	2	Equipment	2	2.5
Self-perception (2)	1	Competence	2	2.5
	2	Interest	1	1.3

For sixth grade males who would elect not to enroll in physical education the most cited subcategories associated with disliking physical education were personal qualities (23.1%) of the teacher and the mile run (15.4%). These were followed by written work, uniform style, and a boring class atmosphere (Table 16).

Table 16  
Negative Incidents by Subcategories  
Sixth Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (7)	1	Mile run	2	15.4
	2	Written work	1	7.7
	3	No choice	1	7.7
	4	Warm-up running	1	7.7
Teacher (1)	1	Personal qualities	3	23.1
Dressing out (1)	1	Uniform style	1	7.7
Atmosphere (1)	1	Boring	1	7.7
Other (0)	--	--	--	--
Self-perception (0)	--	--	--	--

Sixth grade females who would elect to enroll in physical education most often mentioned warm-up running (12.1%), changing time (10.9%), and changing (7.9%) as subcategories associated with disliking physical education (Table 17).

Table 17  
Negative Incidents by Subcategories  
Sixth Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (13)	1	Warm-up running	20	12.1
	2	Mile run	12	7.3
	3	Team sports	10	6.0
	4	No choice	3	1.8
Dressing out (4)	1	Changing time	18	10.9
	2	Changing	13	7.9
	3	Lack of showers	7	4.2
Teacher (6)	1	Evaluation	6	3.6
	2	Style	6	3.6
Atmosphere (4)	1	Competitive	5	3.0
	2	Sexist	5	3.0
Other (4)	1	Injury	7	4.2
	2	Weather	3	1.8
Self-perception (4)	1	Competence	7	4.2
	2	Interest	2	1.2

Incidents that were negative in nature and cited most often by sixth grade females who would elect not to enroll in physical education included changing clothes (17.0%), warm-up running (16.0%), and the mile run which was cited six times (Table 18).

Table 18  
Negative Incidents by Subcategories  
Sixth Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (9)	1	Warm-up running	15	16.0
	2	Mile run	6	6.4
	3	Team sports	6	6.4
	4	Fitness testing	5	5.5
Dressing out (5)	1	Changing	16	17.0
	2	Changing time	2	2.1
Atmosphere (3)	1	Peer conflicts	4	4.3
	2	Co-educational	4	4.3
Teacher (4)	1	Personal qualities	4	4.3
	2	Decisions	1	1.1
Self-perception (2)	1	Competence	3	3.2
	2	Interest	3	3.2
Other (2)	1	Injury	1	1.1
	2	Outside	1	1.1

#### Presentation of Seventh Grade Data

The seventh grade sample comprised of 112 subjects (n=57 male, n=55 female). In response to the hypothetical question, "If physical education was an option next year, would you choose to take it?", 51 males (89.5%) and 36 females (65.5%) answered positively (Table 19).

Table 19

Composition of Seventh Grade Sample: Frequency and Percentage

Group	N	% gender	% total group
Males electing to take PE	51	89.5	45.5
Males electing not to take PE	6	10.5	05.4
Females electing to take PE	36	65.5	32.1
Females electing not to take PE	19	34.5	17.0

Seventh Grade Major Categories

The seventh grade subjects were also asked to record all the incidents they experienced during middle school physical education which caused them to like and dislike physical education. Similar to the sixth grade sample, the top ranked major category associated with liking physical education for all seventh grade groups was curriculum. It was followed by class atmosphere by all groups, except males electing not to take physical education. For this group teacher behavior was ranked second (Table 20).

Table 20

Rank Order of Major Categories Related to Positive IncidentsSeventh Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Atmosphere	2	3	2	2	2
Self-perception	3	--	3	4	3
Other	4	--	5	3	5
Teacher	5	2	4	5	4
Dressing out	6	--	6	6	6

The top ranked major category associated with disliking physical education was also curriculum. For all groups, it was followed by teacher behavior and dressing out (Table 21).

Table 21

Rank Order of Major Categories Related to Negative Incidents  
Seventh Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Teacher	2	2	2	2	2
Dressing out	3	3	3	3	3
Other	4	--	5	--	6
Atmosphere	5	2	4	4	4
Self-perception	6	3	6	5	5

Once again, curriculum was the top ranked major category associated with liking physical education. In all, 156 responses (67.5%) were given by males and 174 (63.3%) by females that linked the physical education curriculum with positive experiences. This was followed by issues related to class atmosphere and self perception for both males and females (Tables 22 and 23).

Table 22

Total Positive Incidents Reported  
Seventh Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	142	66.7	14	77.8	156	67.5
Atmosphere	25	11.7	1	5.5	26	11.2
Self-perception	24	11.3	--	--	24	10.4
Other	14	6.6	--	--	14	6.1
Teacher	8	3.7	3	16.7	11	4.8
Dressing out	--	--	--	--	--	--
Total	213		18		231	



Table 23  
Total Positive Incidents Reported  
 Seventh Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	111	61.0	63	67.7	174	63.3
Atmosphere	28	15.4	20	21.5	48	17.5
Self-perception	18	9.9	3	3.2	21	7.6
Teacher	14	7.7	2	2.2	16	5.8
Other	9	4.9	4	4.3	13	4.7
Dressing out	2	1.1	1	1.1	3	1.1
Total	182		93		275	

Incidents most often cited in relation to disliking physical education for both males and females were also centered around curricular issues. It was mentioned 70 times by males (49.6%) and 81 times by females (48.8%). For males, curriculum was followed by teacher behavior (27.0%) and dressing out (9.2%). Similarly, for females incidents related to teacher behavior (20.5%) and dressing out (13.9%) were also frequently cited (Tables 24 and 25).

Table 24  
Total Negative Incidents Reported  
 Seventh Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	64	51.2	6	37.5	70	49.6
Teacher	35	28.0	3	18.7	38	27.0
Dressing out	11	8.8	2	12.5	13	9.2
Other	7	5.6	--	--	7	5.0
Atmosphere	5	4.0	3	18.7	8	5.7
Self-perception	3	2.4	2	12.5	5	3.5
Total	125		16		141	

Table 25  
Total Negative Incidents Reported  
 Seventh Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	49	47.6	32	50.8	81	48.8
Teacher	24	23.3	10	15.9	34	20.5
Dressing out	14	13.6	9	14.3	23	13.9
Atmosphere	7	6.8	7	11.1	14	8.4
Other	5	4.8	--	--	5	3.0
Self-perception	4	3.9	5	7.9	9	5.4
Total	103		63		166	

Seventh Grade Subcategories

Subcategories within each major category indicate that seventh grade males who would elect to enroll in physical education most often reported team

sports (35.2%), individual and dual sports (10.8%), and a sociable class atmosphere (4.7%) in association with liking physical education (Table 26).

Table 26

Positive Incidents by Subcategories

Seventh Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (13)	1	Team sports	75	35.2
	2	Indiv./dual sports	23	10.8
	3	Fitness conditioning	10	4.7
	4	Choices	9	4.2
Atmosphere (4)	1	Sociable	10	4.7
	2	Enjoyable	9	4.2
	3	Competitive	5	2.3
Self-perception (6)	1	Interest	8	3.8
	1	Health	8	3.8
Other (4)	1	Extrinsic Rewards	5	2.3
	2	Outside	4	1.9
Teacher (3)	1	Personal qualities	3	1.4
	1	Decisions	3	1.4
Dressing out (0)	--	--	--	--

Seventh grade males who would elect not to enroll in physical education primarily mentioned team sports (31.3%) and individual and dual sports (25.0 %) as incidents associated with liking physical education . For this group, the third most cited subcategory was personal qualities (11.1%) of the physical education teacher (Table 27).

Table 27  
Positive Incidents by Subcategories  
Seventh Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (5)	1	Team sports	6	33.3
	2	Indiv./dual sports	3	16.7
	3	Choices	2	11.1
	4	Games	2	11.1
Teacher (2)	1	Personal qualities	2	11.1
	2	Styles	1	5.5
Atmosphere (1)	1	Sociable	1	5.5
Self-perception (0)	--	--	--	--
Dressing out (0)	--	--	--	--
Other (0)	--	--	--	--

Seventh grade females who would choose to enroll in physical education, reported 39 incidents (21.4%) related to team sports that were associated with positive physical education experiences. Individual and dual sports (11.0%) and a sociable class atmosphere (10.4%) were other subcategories that were frequently mentioned (Table 28).

Table 28  
Positive Incidents by Subcategories  
Seventh Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (16)	1	Team sports	39	21.4
	2	Indiv./dual sports	20	11.0
	3	Games	13	7.1
	4	Choices	8	4.4
Atmosphere (6)	1	Sociable	19	10.4
	2	Enjoyable	5	2.7
Self-perception (5)	1	Health	8	4.4
	2	Interest	4	2.2
Teacher (4)	1	Personal qualities	7	3.8
	2	Styles	5	2.7
Other (4)	1	Outside	4	2.2
	2	Extrinsic rewards	3	1.6
Dressing out (1)	1	Borrowing clothes	2	1.1

Seventh grade females who would choose not to enroll in physical education most often cited individual and dual sports (20.4%), team sports (18.3%), and a sociable class atmosphere (11.8%) as experiences which were positive in nature (Table 29).

Table 29  
Positive Incidents by Subcategories  
Seventh Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (7)	1	Indiv./dual sports	19	20.4
	2	Team sports	17	18.3
	3	Games	14	15.4
	4	Choices	10	11.0
Atmosphere (3)	1	Sociable	11	11.8
	2	Enjoyable	6	6.6
Other (2)	1	Outside	3	3.2
	2	Field trips	1	1.1
Self-perception (2)	1	Competence	2	2.2
	2	Success	1	1.1
Teacher (2)	1	Personal qualities	2	2.2
	2	Style	1	1.1
Dressing out (1)	1	Changing	1	1.1

For seventh grade males who would elect to enroll in physical education warm-up running (13.6%), teacher personal qualities (8.0%), and the mile run (7.2%) were the most mentioned subcategories associated with disliking physical education (Table 30).

Table 30  
Negative Incidents by Subcategories  
Seventh Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (14)	1	Warm-up running	17	13.6
	2	Mile run	9	7.2
	3	Fitness testing	6	4.8
	4	Team sports	5	4.0
Teacher (8)	1	Personal qualities	10	8.0
	2	Discipline	7	5.6
	3	Style	5	4.0
Dressing out (5)	1	Changing	4	3.2
	1	Locker room	4	3.2
Other (6)	1	Weather	2	1.6
	2	Inside	1	.8
Atmosphere (3)	1	Peer conflict	3	2.4
	2	Boring	1	.8
Self-perception (2)	1	Interest	3	2.4

For seventh grade males who would elect not to enroll in physical education the most mentioned subcategories associated with disliking physical education were warm-up running (18.8%), fitness testing (12.5%), peer conflict (12.5%), and personal qualities (12.5%) of the teacher (Table 31).

Table 31  
Negative Incidents by Subcategories  
Seventh Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (3)	1	Warm-up running	3	18.8
	2	Fitness testing	2	12.5
	3	Exercises	1	6.3
Teacher (2)	1	Personal qualities	2	12.5
	2	Style	1	6.3
Atmosphere (2)	1	Peer conflict	2	12.5
	2	Peer separation	1	6.3
Self-perception (1)	1	Interest	1	6.3
Dressing out (2)	1	Changing	1	6.3
	1	Locker room	1	6.3
Other (0)	--	--	--	--

Seventh grade females who would elect to enroll in physical education most often cited teacher personal qualities (12.6%), and warm-up running (11.7%) in association with disliking physical education (Table 32).



Table 32  
Negative Incidents by Subcategories  
Seventh Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (9)	1	Warm-up running	12	11.7
	2	Indiv./ dual sports	10	9.7
	3	Mile run	8	7.8
	4	Team sports	8	7.8
Teacher (5)	1	Personal qualities	13	12.6
	2	Style	4	3.9
Dressing out (4)	1	Changing	7	6.8
	2	Changing time	3	2.9
Atmosphere (4)	1	Sexist	3	2.9
	2	Peer conflict	2	1.9
Other (2)	1	Weather	3	2.9
	2	Outside	2	1.9
Self-perception (3)	1	Interest	2	1.9
	2	Competence	1	.9

Seventh grade females who would elect not to enroll in physical education mostly cited issues related to warm-up running (22.2%), the mile run (11.1%), and changing time (7.9%) as negative experiences (Table 33).

Table 33  
Negative Incidents by Subcategories  
Seventh Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (8)	1	Warm-up running	14	22.2
	2	Mile run	7	11.1
	3	Fitness testing	5	7.9
	4	No choices	2	3.2
Teacher (4)	1	Personal qualities	4	6.3
	2	Expectations	3	4.8
Dressing out (3)	1	Changing time	5	7.9
	2	Changing	2	3.2
Atmosphere (4)	1	Peer separation	3	4.8
	2	Peer conflict	2	3.2
Self-perception (2)	1	Embarrassment	3	4.8
	2	Competence	2	3.2
Other (0)	--	--	--	--

#### Presentation of Eighth Grade Data

The eighth grade sample comprised of 112 subjects (n=46 male, n=66 female). In response to the hypothetical question, "If physical education was an option next year, would you choose to take it?", 33 males (71.7%) and 31 females (47.0%) answered affirmatively (Table 34).

Table 34

Composition of Eighth Grade Sample: Frequency and Percentage

Group	N	% gender	% total group
Males electing to take PE	33	71.7	29.5
Males electing not to take PE	13	28.3	11.6
Females electing to take PE	31	47.0	27.7
Females electing not to take PE	35	53.0	31.2

Eighth Grade Major Categories

For all four eighth grade groups the top ranked major category associated with liking physical education were issues related to the physical education curriculum. This was followed by class atmosphere and self-perception by all groups, except females electing not to take physical education. For this group teacher behavior was ranked third. (Table 35).

Table 35

Rank Order of Major Categories Related to Positive IncidentsEighth Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Atmosphere	2	2	2	2	2
Self-perception	3	3	3	5	4
Teacher	4	4	4	3	3
Dressing out	5	--	6	6	6
Other	--	4	5	4	5

The top ranked major category associated with disliking physical education was also curriculum. This was followed by issues related to teacher

behavior and class atmosphere for all males. For females, issues related to dressing out was ranked second, followed by teacher behavior (Table 36).

Table 36

Rank Order of Major Categories Related to Negative Incidents

Eighth Grade

Category	Rank Order				Total groups
	Male (PE)	Male (no PE)	Female (PE)	Female (no PE)	
Curriculum	1	1	1	1	1
Teacher	2	2	2	3	2
Atmosphere	2	3	4	4	3
Dressing out	4	5	2	2	3
Other	5	5	5	5	5
Self-perception	6	4	6	6	6

Positive incidents related to the curriculum were mentioned 102 times (61.4%) by males and 177 times (55.7%) by females. Following curriculum, issues related to class atmosphere (21.7%) and self-perception (10.2%) were most frequently mentioned by males (Table 37) and class atmosphere (22.3%) and teacher behavior (10.4%) by females (Table 38).

Table 37  
Total Positive Incidents Reported  
Eighth Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	78	65.0	24	52.2	102	61.4
Atmosphere	23	19.2	13	28.3	36	21.7
Self-perception	12	10.0	5	10.9	17	10.2
Teacher	5	4.2	2	4.3	7	4.2
Dressing out	2	1.6	--	--	2	1.2
Other	--	--	2	4.3	2	1.2
Total	120		46		166	

Table 38  
Total Positive Incidents Reported  
Eighth Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	98	60.9	79	50.3	177	55.7
Atmosphere	24	14.9	47	29.9	71	22.3
Self-perception	19	11.8	3	1.9	22	6.9
Teacher	12	7.5	21	13.4	33	10.4
Other	6	3.7	5	3.2	11	3.5
Dressing out	2	1.2	2	1.3	4	1.2
Total	161		157		318	

The major category most often cited in relation to disliking physical education for both males and females was curriculum. It was mentioned 54 times

by males (49.5%) and 123 times by females (48.0%). Curriculum was followed by teacher (19.3%) and class atmosphere (16.5%) for males and dressing out (16.4%) and teacher (15.6%) for females (Tables 39 and 40).

Table 39  
Total Negative Incidents Reported  
Eighth Grade Males

Category	Frequency and Percentage of Statements					
	Male (PE)		Male (no PE)		Male total	
	#	%	#	%	#	%
Curriculum	32	51.6	22	46.8	54	49.5
Teacher	10	16.1	11	23.4	21	19.3
Atmosphere	10	16.1	8	17.0	18	16.5
Dressing out	7	11.3	1	2.1	8	7.3
Other	2	3.2	1	2.1	3	2.8
Self-perception	1	1.6	4	8.5	5	4.6
Total	62		47		109	

Table 40  
Total Negative Incidents Reported  
Eighth Grade Females

Category	Frequency and Percentage of Statements					
	Female (PE)		Female (no PE)		Female total	
	#	%	#	%	#	%
Curriculum	51	56.0	72	43.6	123	48.0
Teacher	14	15.4	26	15.8	40	15.6
Dressing out	14	15.4	28	17.0	42	16.4
Atmosphere	8	8.8	24	14.5	32	12.5
Other	3	3.3	8	4.8	11	4.3
Self-perception	1	1.1	7	4.2	8	3.1
Total	91		165		256	

### Eighth Grade Subcategories

For eighth grade males who would elect to enroll in physical education, the most often cited subcategories associated with liking physical education were team sports (29.2%) and unspecified sports (9.2%). The third most cited subcategory was a sociable class atmosphere which accounted for nearly six percent of the responses (Table 41).

Table 41

### Positive Incidents by Subcategories

#### Eighth Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (11)	1	Team sports	35	29.2
	2	Sports	11	9.2
	3	Indiv./ dual sports	9	7.5
	4	Games	5	4.2
Atmosphere (7)	1	Sociable	7	5.8
	2	Enjoyable	5	4.2
Self-perception (4)	1	Health	6	5.0
	2	Interest	4	3.3
Teacher (3)	1	Personal qualities	3	2.5
	2	Discipline	1	.83
Dressing out (2)	1	Changing	3	2.5
	1	Locker room	3	2.5
Other (0)	--	--	--	--

For eighth grade males who would elect not to enroll in physical education, the most mentioned subcategories associated with favorable physical education experiences were a sociable class atmosphere (17.4%), team sports (15.2%), and individual and dual sports (Table 42).

Table 42  
Positive Incidents by Subcategories  
Eighth Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (7)	1	Team sports	7	15.2
	2	Indiv./dual sports	5	10.9
	3	Choices	4	8.6
	4	Novel activities	3	6.5
Atmosphere (2)	1	Sociable	8	17.4
	2	Enjoyable	2	4.3
Self-perception (2)	1	Health	3	6.5
	2	Interest	2	4.3
Teacher (2)	1	Personal qualities	1	2.2
	1	Style	1	2.2
Other (1)	1	Outside	2	4.3
Dressing out (0)	--	--	--	--

Eighth grade females who would choose to enroll in physical education, reported 36 incidents (22.4%) related to team sports that were positive. Incidents associated with individual and dual sports (9.3%) and a sociable class atmosphere (4.3%) were subcategories that were also frequently mentioned (Table 43).



Table 43  
Positive Incidents by Subcategories  
Eighth Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (17)	1	Team sports	36	22.4
	2	Indiv./dual sports	15	9.3
	3	Choices	9	5.6
	4	Games	6	3.7
Atmosphere (6)	1	Sociable	7	4.3
	2	Enjoyable	6	3.7
	3	Competitive	5	3.1
Self-perception (6)	1	Health	7	4.3
	2	Competence	5	3.1
Teacher (3)	1	Personal qualities	7	4.3
	2	Styles	4	2.5
Other (3)	1	Outside	4	2.5
	2	Field trips	1	.62
Dressing out (2)	1	Locker room	1	.62
	1	Borrowing clothes	1	.62

For eighth grade females who would choose not to enroll in physical education, individual and dual sports was the most often cited subcategory associated with positive physical education experiences (19.2%). It was followed by a sociable class atmosphere and team sports (Table 44).

Table 44  
Positive Incidents by Subcategories  
Eighth Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (10)	1	Indiv./dual sports	30	19.1
	2	Team sports	18	11.5
	3	Choices	18	11.5
	4	Novel activities	3	1.9
Atmosphere (7)	1	Sociable	27	17.2
	2	Enjoyable	7	4.5
Teacher (5)	1	Personal qualities	10	6.4
	2	Style	7	4.5
Other (2)	1	Outside	3	1.9
	2	Weather	2	1.3
Self-perception (3)	1	Health	1	.64
	2	Improvement	1	.64
Dressing out (2)	1	Changing	1	.64
	1	Borrowing clothes	1	.64

For eighth grade males who would elect to enroll in physical education the mile run (11.3%), warm-up running (9.7%), and teacher personal qualities (8.1%) were the most cited subcategories associated with disliking physical education (Table 45).

Table 45  
Negative Incidents by Subcategories  
Eighth Grade Males (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (11)	1	Mile run	7	11.3
	2	Warm-up running	6	9.7
	3	Indiv. / dual sports	5	8.1
	4	Fitness testing	3	4.8
Teacher (4)	1	Personal qualities	5	8.1
	2	Discipline	2	3.2
Atmosphere (4)	1	Peer conflict	4	6.5
	2	Peer grouping	3	4.8
Dressing out (4)	1	Locker room	3	4.8
	2	Changing time	2	3.2
Other (2)	1	Injury	1	1.6
	1	Facilities	1	1.6
Self-perception (1)	1	Competence	1	1.6

Eighth grade males who would elect not to enroll in physical education mostly cited issues related to warm-up running (14.9%), teacher personal qualities (14.9%), and peer conflicts (14.9%) as experiences which were negative in nature (Table 46).

Table 46  
Negative Incidents by Subcategories  
Eighth Grade Males (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (11)	1	Warm-up running	7	14.9
	2	Team sports	3	6.4
	3	Indiv. / dual sports	3	6.4
	4	Fitness testing	2	4.3
Teacher (4)	1	Personal qualities	7	14.9
	2	Style	2	4.3
Atmosphere (2)	1	Peer conflict	7	14.9
	2	Misconduct	1	2.1
Self-perception (3)	1	Interest	2	4.3
	2	Competence	1	2.1
Dressing out (1)	1	Locker room	1	2.1
Other (1)	1	Inside	1	2.1

For eighth grade females who would elect to enroll in physical education team sports (18.7%), warm-up running (8.8%), and teacher style (8.8%) were the most cited subcategories associated with disliking physical education (Table 47).

Table 47  
Negative Incidents by Subcategories  
Eighth Grade Females (PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (15)	1	Team sports	17	18.7
	2	Warm-up running	8	8.8
	3	Mile run	5	5.5
	4	Fitness testing	4	4.4
Teacher (4)	1	Style	8	8.8
	2	Personal qualities	3	3.3
Dressing out (5)	1	Changing	5	5.5
	2	Changing time	3	3.3
Atmosphere (2)	1	Peer separation	5	5.5
	2	Peer conflict	3	3.3
Other (3)	1	Inside	1	1.1
	1	Outside	1	1.1
Self-perception (1)	1	Competence	1	1.1

Eighth grade females who would elect not to enroll in physical education frequently cited team sports (12.1%), the mile run (11.5%), and changing time (8.5%) as negative incidents experienced during physical education (Table 48).

Table 48  
Negative Incidents by Subcategories  
Eighth Grade Females (no PE)

Category (no. subcat.)	Rank	Subcategory	#	%
Curriculum (14)	1	Team sports	20	12.1
	2	Mile run	19	11.5
	3	Warm-up running	9	5.4
	4	No choices	9	5.4
Dressing out (5)	1	Changing time	14	8.5
	2	Uniform style	5	3.0
Teacher (7)	1	Personal qualities	10	6.0
	2	Fairness	4	2.4
Atmosphere (8)	1	Peer conflict	8	4.8
	2	Peer separation	5	3.0
Other (3)	1	Outside	4	2.4
	2	Equipment	2	1.2
Self-perception (2)	1	Competence	4	2.4
	2	Interest	3	1.8

### Summary

Subjects for this study were asked to record the event or events which caused them to like and dislike physical education. Through the use of the critical incident technique, all responses were categorized into major and subcategories. The data just presented indicates that curriculum content, class atmosphere, teacher behavior, dressing out, and self-perception were all major categories associated with liking and disliking physical education. In the following chapter a discussion of the data and implications will be offered.

## CHAPTER 5

### DISCUSSION & IMPLICATIONS

The purpose of this study was to examine students' attitudes toward a middle school physical education program, and to identify factors that contribute to positive and negative attitudes towards physical education. Data was collected through the critical incident technique and was presented in the previous chapter. This chapter will provide a discussion of that data. The discussion will begin with an overview of the subjects' attitudes toward their physical education program and will continue with an examination of the major categories linked with those attitudes.

#### Attitudes Toward the Physical Education Program

To determine the students' attitudes toward their middle school physical education program, subjects were asked to respond to the following hypothetical question, "If physical education was optional next year, would you choose to take it?" An analysis of subject responses reveal that nearly 90 percent of sixth and seventh grade boys indicated that they would choose to enroll in physical education. By eighth grade, this figure had plummeted to just under 72 percent. Furthermore, for females there was a steady and consistent drop off in those electing to enroll in physical education. In the sixth grade, just over 72 percent of the girls indicated that they would enroll in physical education the following year. In grade seven, the percentage had fallen to just under 66 percent and by grade eight it was down to 47 percent.

Based on these figures, it may be concluded that for this sample, boys at all grade levels were more likely to enroll in physical education than girls. Additionally, all eighth grade students were less likely to enroll in physical education than sixth grade students. These trends confirm the findings of Treanor, Graber, Housner, and Wiegand (1998) and King (1994) who concluded that with each passing grade student attitudes toward physical education decline. Their findings also showed that this phenomenon was more apparent for girls than boys. Additionally, the trends reported in this study parallel the physical activity trends of adolescents as reported in the National Health Interview Survey-Youth Risk Behavior Survey (NHIS-YRBS) [as cited in United

States Department of Health and Human Services, 1996]. The NHIS-YRBS reported that as adolescents increase in age, physical activity decreases. It was also reported that lower levels of physical activity was more prevalent in females. These studies corroborate the findings of this study, which indicate that as students progress in grade, attitudes toward physical education are less favorable. This is even more pronounced with females.

### Major Categories

In addition to examining students' attitudes toward physical education, the intent of this study was to also investigate the factors that contribute to those attitudes. Several major categories were identified as contributors to both positive and negative attitudes. These include: curriculum content, class atmosphere, teacher behavior, dressing out, and self perception. In the following sections each of these categories will be discussed.

#### Curriculum

For all groups the most overwhelming major category associated with both positive and negative incidents was curriculum content. Overall, 974 incidents (61.2%) related aspects of the curriculum with liking physical education and 489 incidents (47.8%) associated aspects of the curriculum with disliking physical education. The link between curriculum content and liking and disliking physical education was also found in studies conducted by Figley (1985) and Luke and Sinclair (1991). Both of these research teams reported curriculum content as the most influential factor associated with positive and negative attitudes toward physical education.

Specific subcategories within the curriculum category indicate that team sports and individual and dual sports were most frequently cited in association with positive physical education experiences. Many subjects concur with statements such as, "I love [it] when we play basketball", or "the tennis unit was something that I experienced in middle school physical education that caused me to like it".

In addition to team, individual, and dual sports, several students mentioned curricular choice as a factor which contributed to liking physical education. Many students echoed the sentiments of this seventh grade girl who



wrote, "I like being able to make choices to decide what I want to do in gym some days".

The lack of curricular choices was also frequently cited as factors relating to disliking physical education. One student wrote, "I dislike physical education mainly because we don't have very much choice in what we do". Another wrote "[I do not like] the fact that we have to play every sport no matter if we don't like it, can't play it, or it makes us feel stupid." These statements summarize quite poignantly how many students associated the lack of curricular choice with negative attitudes toward physical education.

Other frequently cited incidents that students associated with disliking physical education were warm-up running and the mile run. Students consistently stated how much they disliked the four minute warm-up run required on most days. Many students used words such as "boring" or "pointless" to describe the required warm-up run.

The mile run was also viewed distastefully by many students. The resentment towards the mile run was summarized best by this eighth grade female who wrote:

One thing I truly do not like about P.E. is running the mile. I love playing basketball and soccer, yet you run. And running while playing sports doesn't seem like work. I don't like the mile because it's just a pointless four laps around the track. I really don't understand why we are made to do it in the first place. If we play some other sport or game that involves running, I think it should take place of the mile.

It was clear that for the sample studied, issues related to the curriculum were most often cited in relation to both liking and disliking physical education. In the following section class atmosphere, another major category will be discussed.

### Class Atmosphere

Class atmosphere was identified as the second ranked major category associated with positive physical education experiences by all groups except sixth and seventh grade males who would not elect to enroll in physical education. Of all the groups, class atmosphere was mentioned most by sixth and

eighth grade girls, and eighth grade boys. All in all, class atmosphere accounted for 18.5 percent of all the determinants that led to positive attitudes.

Two emerging subcategories associated with class atmosphere and positive physical education experiences were identified. The first was an atmosphere that was conducive to social interaction and the second was an enjoyable environment. In fact, of all the comments related to class atmosphere 71% were affiliated with social interaction or class enjoyment.

In relation to negative physical education experiences, class atmosphere was ranked fourth by sixth and seventh grade subjects, and third by eighth grade subjects. Peer conflict was a specific subcategory within the class atmosphere category that many subjects frequently cited in association with disliking physical education. Specific examples of peer conflict included arguing with other students or inappropriate comments made from one student to another. For instance one student commented, "events causing me to dislike P.E. include when people who are 'better' than you at a sport make fun of you because of your talent level". Other examples of peer conflict include social elitism. As this eighth grade boy described, "I very much dislike it when all of the people who are friends and 'popular' hog the ball, puck, birdie, net, etc., leaving you out".

In addition to peer conflict, several subjects recorded incidents that described the dissatisfaction associated with not being able to work in self-selected groups or with self-selected partners. Comments such as, "I dislike [it] when we cannot choose our partners to work with" were frequently cited.

Another subcategory related to class atmosphere that emerged as a factor associated with disliking physical education was sexism. Many girls commented on how some boys were sexist to their female counterparts. For instance, this seventh grade girl wrote, "the boys always act like 'macho men' and think they can do everything. That really discourages me when guys start showing off and ignore the girls as if we couldn't do it".

### Teacher

After class atmosphere, teacher was identified as the third highest ranked major category associated with positive physical education experiences by sixth and eighth grade subjects and fourth by seventh grade subjects. Issues related to

the teacher which appeared to instigate favorable incidents were especially apparent for sixth grade girls who would choose to enroll in physical education and eighth grade girls who would not choose to enroll in physical education.

In terms of overall ranking of major categories which were associated with disliking physical education, teacher was ranked second by seventh and eighth grade subjects and third by sixth grade subjects. Negative experiences attributed to teacher behavior was especially prevalent for seventh grade males choosing to enroll in physical education, seventh grade females choosing to enroll in physical education, and eighth grade females electing not to enroll in physical education.

The most prolific teacher related subcategory which was associated with liking and disliking physical education was teacher personal qualities. In fact, it accounted for 78% of all positive comments related to the teacher and 39% of all negative comments related to the teacher. Teacher qualities that led to positive attitudes were often represented in words such as "nice" or "fun" to describe teachers. Other students were more specific when describing teacher personal qualities. For example, this sixth grade female wrote "what caused me to like physical education was my teacher. She kept on encouraging me saying, 'try to hit the ball harder' or 'keep your eye on the ball'.

In addition to personal qualities, the way in which the teacher delivered the content (teacher style) also received considerable attention. Many students reported how teachers spend too much time verbalizing. One student wrote, "the teacher talks about the game too much instead of letting us get involved with the game".

Based on this sample, students frequently cited teacher behavior in association with disliking physical education. Although teacher behavior was also mentioned in relation to positive physical education experiences, it was not as prevalent. In the following section, dressing out will be discussed.

### Dressing Out

In relation to positive physical education experiences "dressing out" was ranked last by all groups. However, in relation to negative physical education experiences, "dressing out" ranked second for sixth grade subjects and third for seventh and eighth grade subjects. Overall, issues relating to dressing out

accounted for nearly 16 percent of all the negative incidents reported by all groups. It was reported most frequently by females. Specific aspects of dressing out that were associated with negative physical education experiences included locker room conditions, uniform style, and lack of showers. The most mentioned aspect of dressing out associated with negative experiences was the actual process of changing and the time given to change.

Most of the comments associated with the displeasure subjects associated with dressing out were written in a simple and direct tone. "The thing I really dislike [about P.E.] is having to dress out into gym clothes" is an example of how many subjects worded their dissatisfaction with changing for physical education class. Some students offered more detail to express an uneasiness or awkwardness associated with changing in front of peers. For example this sixth grade female wrote, "[I dislike] changing in locker rooms where people can look at you".

Subjects also recorded dissatisfaction with the amount of time allocated for changing clothes. One student wrote:

I know that dressing out for gym has to be done, but that is my main complaint about gym. I think that we do not have enough time for dressing out at the end of gym. A lot of people I know complain about this. We get out of gym and have three to four minutes to get dressed, get the sweat and stench off of your body, put shoes on, [and] fix hair since it usually gets sweaty.

Changing time was also mentioned in the context of teachers dismissing students late. Several students reported discontentment with being dismissed late, thus limiting changing time. This sixth grade female wrote, "I don't like it when we don't have enough time, because we get let out of gym [late]. I don't think it's fair that the teachers let us out late".

All in all, issues relating to dressing out were mainly associated with negative experiences. Although, a few positive experiences associated with dressing out were cited, most responses were negative in nature. In the final section, self-perception will be analyzed.

### Self-perception

Self-perception as related to positive physical education experiences was ranked third by seventh grade subjects and fourth by sixth and eighth grade subjects. It was mentioned most by seventh grade males choosing to enroll in physical education. The most mentioned subcategory associated with self-perception were personal interest in the content and health related benefits derived from physical activity. These two subcategories accounted for 66 percent of all the comments associated with positive attitudes attributed to self-perception.

In relation to negative experiences associated with physical education, self-perception ranked fifth for sixth and seventh grade subjects and sixth for eighth grade subjects. A prominent cited subcategory associated with negative experiences was lack of personal interest. One student wrote, "one thing I hate the most is having to do something you don't want to do. Like when you have to play a sport you don't like".

Students also mentioned low skill level or perceived lack of competence as factors which caused them to dislike physical education. One of those citations is from this sixth grade female who writes, "well, I'll just say I'm no superstar basketball player. When [my teacher] says everyone is going to play basketball, I always embarrass myself because I do things wrong".

The discussion on self-perception revealed that most incidents regarding this factor were in relation to positive experiences. Although students did record incidents related to self-perception that seemed to be associated with negative experiences, most were positive in nature.

### Implications

In the previous sections the presentation and discussion of data suggest that positive attitudes toward physical education decrease as students advance in grade level. Factors which contributed to both positive and negative attitudes included: curriculum content, class atmosphere, teacher behavior, dressing out, and self perception. Based on these findings several implications will be offered.

The first implication is that this middle school physical education program needs to consider offering students the opportunity to choose some or

all of their curriculum. It has been suggested that middle school programs offer students a variety of physical activities designed to "expose students to a variety of adventure, sport, dance, gymnastic, and physical fitness activities" (Graham, 1990, p. 35). From the students perspective this model might be both positive and negative. Obviously the positive comes when the activity is in line with a particular student's interest. However, this study suggests that activities which students deem unappealing appear to contribute to negative attitudes toward physical education. This phenomenon is especially apparent for students in grades seven and eight. With this in mind, middle school physical educators should consider providing opportunities for students to select activities which they find most interesting...especially in grades seven and eight.

In addition to student choice, the findings of this study suggest that middle school curriculum of this program needs to provide students with the opportunity to become competent movers. From a philosophical perspective, if the goal of physical education is to encourage lifetime physical activity, then students must be provided adequate time to become competent in activities in which they can perform for a lifetime. From an attitudinal standpoint, many students noted competence as a factor associated with positive attitudes. However, because the exposure model offers several, short term activities, competency is hard to attain. Lambert (1987) argues:

Does the exposure of students to a smorgasbord of activities during their secondary years result in their physical education? Probably not. Gearing programs toward gaining personal fitness abilities and knowledge as well as ensuring adequate skill in one or two lifetime sports may be a better model" (p. 30).

The third implication is the need to provide students with alternative forms of daily exercises and warm-ups. One option is to provide students with a variety of instant activities in the beginning of each class (Graham, 1992). Instead of simply running for four minutes each day, students could jump rope, rotate through fitness stations, or practice specific sport related skills. Along the same line, stretching routines might be altered. Instead of forcing students to go through the same exercises and stretches each day, they might be task specific. In other words, the lesson determines which stretches are performed each day.

There is no need to go through the same routine each day and prepare muscles that will not be used. Additionally, a variety of formations while stretching could also be used. Students could stretch in dyads, triads, or occasionally in groups of five to six. Both the instant activity and task specific stretching should heighten student interest in preliminary warm-ups.

A fourth curricular implication is to provide students with alternatives to the mile run. The mile run is intended to promote aerobic fitness and to gauge the cardiovascular fitness level of respective students. The students in this study, at all grade levels, appeared to greatly dislike the mile run. Perhaps this middle school physical education programs might offer a variety of aerobic activities for students to choose from (e.g. roller blading, mountain biking, aerobic dance). Furthermore, student success could be measured according to maintaining the appropriate target heart rate, rather than completing the mile in a required time.

The fifth implication is the need to provide students with adequate time to dress into and out of the physical education uniform. Students are currently given four minutes for changing. Often times students are dismissed late which reduces the changing time even more. Therefore, students should be given at least five minutes to change clothes and teachers must ensure that students are given the entire allotment of time.

The final implication is the need to assign sections of the locker room according to respective grade levels. For instance, sixth grade females could be assigned one section of the locker room, seventh grade another, and eighth grade yet another. Separating the students according to grade level should alleviate some of the awkwardness that many of the younger students feel (sixth grade females in particular) when they are forced to change in front of further developed older students.

### Summary

The attitudes of middle school students toward a physical education program and the identification of factors which appear to contribute to those attitudes was uncovered through the critical incident technique. Data just discussed indicate that as these middle school students advanced in grade, attitudes toward physical education decline. Identified major categories which

contribute to both positive and negative attitudes included: curriculum, class atmosphere, teacher, dressing out, and self-perception. Based on these findings several implications were provided. In the following chapter, a summary of this study accompanied by conclusions, as well as recommendations for future research will be offered.



## CHAPTER 6

### SUMMARY, CONCLUSIONS, & RECOMMENDATIONS FOR FUTURE RESEARCH

In this chapter, the study is summarized by including the purpose of inquiry, six guiding questions, and method used to collect data. Additionally, based on the findings from this study conclusions are offered and future research investigations are recommended.

#### Summary

In recent years there has been mounting evidence that supports the health related benefits that are gained by individuals who engage in moderate levels of physical activity. One document in particular, *Physical Activity and Health, A Report of the Surgeon General (1996)*, has been a landmark publication which clearly presents those benefits. Unfortunately, as the research supporting the benefits of physical activity becomes more apparent, many segments of our population are still not adhering to the call, opting instead for a sedentary lifestyle.

One group in particular that is of great concern to health professionals is young people between the ages of 12-21. Research has shown that levels of physical activity begin to decrease starting at age 12 and continue decreasing throughout adolescence (United States Department of Health and Human Services, 1996). In an attempt to combat the levels of sedentary lifestyles that are plaguing many of our young people, health professionals are calling upon middle and high school physical education to equip students with the skills and knowledge necessary to become physically active for a lifetime.

In order for physical education to accomplish this goal, it is essential that student attitudes be considered when making curricular and program decisions. Up to this point, student voices have been rarely considered--this is especially true for middle school students. Subsequently, little is known about which aspects of middle school physical education evoke positive or negative attitudes in students. This information, if available could assist practitioners, teacher educators, and curriculum developers in providing optimal physical education experiences for middle school students. Therefore, the purpose of this study was

to examine middle school students' attitudes toward a physical education program and to determine the various aspects of the program that appear to contribute to positive and negative attitudes toward middle school physical education. The following research questions guided this study:

1. What aspects of physical education do sixth, seventh, and eighth grade boys and girls with positive attitudes toward physical education find most and least enjoyable?
2. What aspects of physical education do sixth, seventh, and eighth grade boys and girls with negative attitudes toward physical education find most and least enjoyable?

In order to address these questions the Middle School Physical Education Critical Incident Survey (MSPECIS) was administered to 348 (n=150 males, n=198 females) subjects attending a middle school in the southeast portion of the United States. The survey had two parts. Part one established attitudes toward middle school physical education by requesting subjects to respond to the question, "If physical education was optional next year would you choose to take it?" Students who answered "yes" were categorized as having a positive attitude toward physical education, students who answered "no" were categorized as having a negative attitude.

Part two of the MSPECIS requested that subjects describe events which they experienced during middle school physical education which caused them to like and dislike physical education. Through the use of the critical incident technique all of the recorded words and phrases were grouped into major and subcategories. The major and subcategories were analyzed to determine factors which contribute to positive and negative attitudes toward physical education.

### Conclusions

For the subjects in this study, overall attitudes toward physical education declined between grades six and eight. This trend was more apparent for females than for males. Major categories associated with liking and disliking physical education included curriculum content, class atmosphere, teacher behavior, dressing out, and self-perception. Curriculum content was the top ranked major category associated with both liking and disliking physical education.

Subcategories indicated that team, individual, and dual sports were the top categories associated with positive physical education experiences and warm-up running and the mile run were the top categories associated with negative experiences. Curricular choice was also cited in connection with both positive and negative experiences.

The second highest ranked major category associated with positive physical education experiences for both males and females was class atmosphere. Many subjects cited incidents related to a sociable and enjoyable class atmosphere as experiences during physical education that were positive in nature.

The second highest ranked major category associated with negative experiences for males was teacher behavior. For females, dressing out was the second highest ranked major category associated with disliking physical education.

The conclusions drawn from this study offer insight into student attitudes toward middle school physical education and factors which contribute to those attitudes. Although this study will contribute to the research in this area, additional investigations are needed.

#### Recommendations for Future Research

This study added to the limited research on middle school physical education by investigating students' attitudes toward a middle school physical education program. The insights gathered from this study, although helpful, are in no way exhaustive. It is therefore imperative that future research in this area continue.

An obvious starting point would be to further investigate the role of curriculum content on middle school students' attitudes toward physical education. Future research could investigate the attitudes of middle school students who are exposed to non-traditional or innovative curriculums. Examples of such programs may include programs in which students choose all or part of their curriculum or programs in which curricular scope and sequence are narrowed to provide students with more depth and less breadth. Research in

this area could be conducted according to grade level, gender, or perceived competency just to name a few.

Although this study provided some rich insights into students' attitudes toward middle school physical education it was only representative of a small sample. Therefore, a second recommendation for future research is the replication of this study with various populations from various locations. More specifically, student attitudes toward physical education should continue to be examined according to school location (urban, rural, or suburban) and according to student ethnicity.

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## Appendix A

## Middle School Physical Education Critical Incident Survey

**PART I**

**DIRECTIONS:** Please put a check besides the response that best describes you. If you have any questions please feel free to ask. Please do not answer any question you feel uncomfortable answering.

1. Sex: \_\_\_\_M \_\_\_\_F

2. Grade Level: \_\_\_\_6 \_\_\_\_7 \_\_\_\_8

3. If physical education was optional next year, would you choose to take it?

\_\_\_\_Yes

\_\_\_\_No

4. For your age group, how would you rate your body build?

\_\_\_\_Over Size

\_\_\_\_Average

\_\_\_\_Under Size

5. For your age group, how would you rate your level of fitness?

\_\_\_\_In top condition

\_\_\_\_In good condition

\_\_\_\_In fair condition

\_\_\_\_In poor condition

6. For your age group, how would you rate your ability in sports?

\_\_\_\_Excellent at sports

\_\_\_\_Good at sports

\_\_\_\_Average at sports

\_\_\_\_Fair at sports

\_\_\_\_Poor at Sports





## Appendix B

### Preliminary Survey Instructions

Hello, my name is Mr. Krouscas and I am a student at Virginia Tech. I am here because I am working on a school project about middle school physical education. In just a few seconds you will be given a survey. (Hold up the MSPECIS.) Listed on the survey are questions regarding your middle school physical education experience. The survey contains two parts.

Part one is on the front page. The directions for part one are to put a check besides the response that best describes you. Part two begins on page two and continues to page three. Part two contains two questions. The first question on part two requests that you write the event or events that you have experienced during middle school physical education, that have caused you to like physical education. The second question on part two requests that you write the event or events that you have experienced during middle school physical education, that have caused you to dislike physical education.

If you noticed, both questions ask you to list events that happened to you during middle school physical education. When answering these questions please know that these events may include interactions you may have had with teachers, interactions you may have had with other students, situations that may have occurred in the locker room or specific activities you have done before or during class.

Please be as honest as possible, I will be the only person reading your responses. Your teacher will not have access to your responses. In fact that is why you were not asked to write your names on these surveys. If at any time you have any questions please raise your hand and I will come over to where you are located. When you have completed the survey please turn it over and wait patiently.



## Appendix C

### Request for Approval of Investigation Involving Human Subjects

Investigator(s): James A. Krouscas, Jr. and Dr. George Graham

Department: Teaching and Learning

Project Title: Student Attitudes' Toward Middle School Physical Education

Source of Support: Departmental Research  Sponsored Research

Proposal No. \_\_\_\_\_

1. The criteria for "expedited review" by the Institutional Review Board for a project involving the use of human subjects and with minimal risk is one or more of the following. Please initial all applicable conditions and provide a substantiating statement of protocol.

a. Collection of:

- 1) hair or nail clipping in a non-disfiguring manner;
- 2) deciduous teeth;
- 3) permanent teeth if patient care indicates need of extraction.

b. Collection of excreta and external secretions: sweat, uncanulated saliva, placenta removed at delivery, amniotic fluid obtained at time of rupture of the membrane.

c. Recording of data from subjects 18 years or older, using non-invasive procedures routinely employed in clinical practice. Exemption does not include exposure to electromagnetic radiation outside the visible range.

d. Collection of blood samples by venipuncture (not exceeding 150 ml/8 week period, and no more than twice a week) from subjects 18 years or older, in good health and not pregnant.

e. Collection of supra- and subgingival dental plaque and calculus, provided the procedure is no more invasive than routine sealing of the teeth.

f. Voice readings.

g. Moderate exercise by healthy volunteers.

h. Study of existing data, documents, records, pathological specimens or diagnostic specimens.

i. Research on drugs or devices for which an investigational exemption is not required.

2. If the project involves human subjects who are exposed to "more than minimal risk" and are not covered by the criteria above (a to i), the IRB review must involve the full

IRB board. Please check if the research involves more than minimal risk\*\* \_\_\_ and provide a substantiating statement of protocol.

3. Human subjects would be involved in the proposed activity as either: Minors and/or Children\* X, Fetuses\_\_\_, Abortuses\_\_\_, Pregnant Women\_\_\_, Prisoners\_\_\_, Mentally Retarded\_\_\_, Mentally Disabled\_\_\_.

Note that if children are involved in the research as human subjects, they may have to provide consent as well as their parents.

Whether or not the project may undergo "expedited review" or must be reviewed by the full Institutional Review Board, it is necessary that the required informed consent forms also be reviewed. These should be submitted with the proposal. However, if there is insufficient time to meet the sponsor's deadline, submittal can be delayed up to thirty days after submittal of the proposal without jeopardizing the IRB certification to the prospective sponsor.

\*Minimal risk means that the risks of harm anticipated in the proposed research are not greater, considering the probability and magnitude, than those encountered in daily life or during performance of routine physical or psychological examinations or tests.

\*\*Subject at risk is an individual who may be exposed to the possibility of injury as a consequence of participation as a subject in any research, development or related activity which departs from the application of those established and accepted methods necessary to meet his needs, or which increases the ordinary risks of daily life, including the recognized risks inherent in a chosen occupation or field of science.

This is to certify that the project identified above will be carried out as approved by the Human Subject Review Board and will neither be modified nor carried out beyond the period approved below without express review and approval by the Board.

\_\_\_\_\_  
Investigator(s)/Date

The Human Subjects Review Board has reviewed the protocol identified above, as it involves human subjects, and hereby approves the conduct of the project for \_\_\_months, at which time the protocol must be resubmitted for approval to continue.

\_\_\_\_\_  
Departmental Reviewer/Date

\_\_\_\_\_  
Chair, Institutional Review Board/Date

## Appendix D

### Informed Consent for County Administrator

#### VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

**Title of Project:** Student Attitudes Toward Middle School Physical Education

**Investigators:** James A. Krouscas, George Graham

**Purpose:**

Many are concerned about the lack of physical activity that currently exists in the life of many middle school students. To help reverse this trend many are looking to physical education as a logical starting point. The purpose of this study is to investigate student attitudes toward middle school physical education with the belief that having such information will enhance the quality of middle school physical education.

**Procedures:**

If you choose to allow this study to be conducted in the school district in which you preside, students will be asked to complete a questionnaire during one of their physical education classes. The questionnaire should take approximately 25 minutes for each student to complete. The questionnaire contains questions which address student attitudes toward physical education (what they like about physical education, what they don't like about physical education). A student can refuse to answer any question they don't want to answer. Additionally, participating students may ask the person administering the questionnaire to clarify any questions that they find unclear.

**Risks:**

Since students will be filling out a questionnaire, there should be no risks involved.

**Benefits:**

There are no direct benefits for those students choosing to participate in this study, however their participation might improve the quality of middle school physical education in future days.

**Extent of Anonymity and Confidentiality:**

As a way to secure anonymity, students participating in this study will not be asked to write their names on the questionnaire. All data will be coded by gender and grade. To ensure confidentiality, data will only be examined by researchers from Virginia Tech. The physical education teacher will not have access to the data.

**Compensation:**

Students, teachers, or the participating school will receive no compensation for being involved with this study.

**Freedom to Withdraw:**

Students or teachers are free to withdraw from participation in this study at any time. Just inform the person administering the questionnaire or call one of the others listed at the bottom of this page.

By signing below, you indicate that you have read and understood the informed consent and conditions of this project, that you have had all of your questions answered, and that you give your voluntary consent that William Byrd Middle School may participate in this project.

---

Signature/Date

**Investigators:**

James A. Krouscas 231-5269  
George Graham 231-5269

H.T. Hurd, Chair IRB 231-8327

Appendix E  
Informed Consent for Principal

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

**Title of Project:** Student Attitudes Toward Middle School Physical Education

**Investigators:** James A. Krouscas, George Graham

**Purpose:**

Many are concerned about the lack of physical activity that currently exists in the life of many middle school students. To help reverse this trend many are looking to physical education as a logical starting point. The purpose of this study is to investigate student attitudes toward middle school physical education with the belief that having such information will enhance the quality of middle school physical education.

**Procedures:**

If you choose to allow this study to be conducted at the school at which you are the principal, students will be asked to complete a questionnaire during one of their physical education classes. The questionnaire should take approximately 25 minutes for each student to complete. The questionnaire contains questions which address student attitudes toward physical education (what they like about physical education, what they don't like about physical education). A student can refuse to answer any question they don't want to answer. Additionally, participating students may ask the person administering the questionnaire to clarify any questions that they find unclear.

**Risks:**

Since students will be filling out a questionnaire, there should be no risks involved.

**Benefits:**

There are no direct benefits for those students choosing to participate in this study, however their participation might improve the quality of middle school physical education in future days.

**Extent of Anonymity and Confidentiality:**

As a way to secure anonymity, students participating in this study will not be asked to write their names on the questionnaire. All data will be coded by gender and grade. To ensure confidentiality, data will only be examined by researchers from Virginia Tech. The physical education teacher will not have access to the data.

**Compensation:**

Students, teachers, or this school will receive no compensation for being involved with this study.

**Freedom to Withdraw:**

Students or teachers are free to withdraw from participation in this study at any time. Just inform the person administering the questionnaire or call one of the others listed at the bottom of this page.

By signing below, you indicate that you have read and understood the informed consent and conditions of this project, that you have had all of your questions answered, and that you give your voluntary consent that your school may participate in this project.

---

Signature / Date

**Investigators:**

James A. Krouscas 231-5269

George Graham 231-5269

H.T. Hurd, Chair IRB 231-8327

Appendix F  
Informed Consent for Teacher

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

**Title of Project:** Student Attitudes Toward Middle School Physical Education

**Investigators:** James A. Krouscas, George Graham

**Purpose:**

Many are concerned about the lack of physical activity that currently exists in the life of many middle school students. To help reverse this trend many are looking to physical education as a logical starting point. The purpose of this study is to investigate student attitudes toward middle school physical education with the belief that having such information will enhance the quality of middle school physical education.

**Procedures:**

If you choose to allow your class to participate in this study, students will be asked to complete a questionnaire during one of their physical education classes. The questionnaire should take approximately 25 minutes for each student to complete. The questionnaire contains questions which address student attitudes toward physical education (what they like about physical education, what they don't like about physical education). A student can refuse to answer any question they don't want to answer. Additionally, participating students may ask the person administering the questionnaire to clarify any questions that they find unclear.

**Risks:**

Since students will be filling out a questionnaire, there should be no risks involved.

**Benefits:**

There are no direct benefits to students for participating in this study, but their participation in this research might improve the quality of middle school physical education.

**Extent of Anonymity and Confidentiality:**

As a way to secure anonymity, students participating in this study will not be asked to write their names on the questionnaire. All data will be coded by gender and grade. To ensure confidentiality, data will only be examined by researchers from Virginia Tech. As the physical education teacher, you will not have access to the data.

**Compensation:**

You or your students will receive no compensation for being involved in this study.

**Freedom to Withdraw:**

You or your students are free to withdraw from participation in this study at any time. Just inform the person administering the questionnaire or call one of the others listed at the bottom of this page.

By signing below, you indicate that you have read and understood the informed consent and conditions of this project, that you have had all of your questions answered, and that you give your voluntary consent that your class may participate in this study.

---

Signature / Date

**Investigators:**

James A. Krouscas 231-5269  
George Graham 231-5269

H.T. Hurd, Chair IRB 231-8327



## Appendix G

## Parental Consent to Participate in a Research Project

Virginia Tech  
 Health and Physical Education Program  
 206 War Memorial Hall  
 Blacksburg, VA 24060

Dear Parent or Guardian,

Your son/daughter is invited to participate in a physical education research project designed to study the attitudes of middle school students toward physical education. It is hoped that the information gathered in this study will enhance the physical education program at William Byrd Middle School.

If you choose to allow your son or daughter to participate, they will be asked to complete a questionnaire during one of their physical education classes. The questionnaire should take approximately 25 minutes for your child to complete. The questionnaire contains questions which address your child's attitude towards physical education (e.g. what they like about physical education, what they don't like about physical education).

Please be assured that survey responses will in no way impact your child's grade in physical education. In fact, as a way to secure anonymity, your child will not be asked to write their names on the questionnaire. Additionally, completed surveys will only be examined by researchers from Virginia Tech. Your child's physical education teacher will not have access to the completed surveys.

By signing below, you indicate that you have read and understood the informed consent and conditions of this project and that you give your voluntary consent that your child participate in this project. If you choose to allow your child to participate, please have them return this form to their physical education teacher by Friday, February 26.

---

Student Name

---

Parent/Guardian Signature/Date

Thank you for your willingness to consider having your child participate in this project.

Sincerely,

James Krouscas

If you have any additional questions regarding this project please contact James Krouscas or Dr. George Graham at (540) 231-5269.

Appendix H  
Student Assent Form

Dear Student,

Thank you for your willingness to participate in this research project. The purpose of this project is to study the attitudes of middle school students towards physical education. It is hoped that the information gathered in this study will be used to improve the quality of physical education throughout the United States.

In just a few moments, you will be asked to complete a questionnaire. The questionnaire should take approximately 20 minutes for you to complete. Please be assured that survey responses will in no way impact your grade in physical education. In fact, as a way to prevent anyone from identifying your responses, you will not be asked to write your names on the questionnaire. Additionally, completed surveys will only be examined by researchers from Virginia Tech. Your physical education teacher will not have access to the completed surveys.

Although your participation in this study is greatly appreciated, you will not receive any compensation as a result of your involvement in this study. If at any time you decide you do not want to participate in this study, you are free to withdraw.

By signing below, you indicate that you have read and understood the conditions of this project, that you have had all of your questions answered, and that you want to participate in this project.

---

Student's Signature/Date

Curriculum Vita  
James A. Krouscas, Jr.

## EDUCATIONAL BACKGROUND

Ph.D. - Physical Education Pedagogy  
Virginia Polytechnic Institute and State University  
May, 1999

Master of Science - Physical Education  
California State University, Hayward, CA  
June, 1991

Bachelor of Science - Physical Education  
California State University, Sacramento, CA  
June, 1989

## CREDENTIAL

State of California Single Subject Credential in Physical Education  
June, 1993

## WORK EXPERIENCE

**1996-1999**                      **Graduate Assistant**  
**Virginia Polytechnic Institute and State University**

- Teaching Responsibilities

EDPE 2334 - Teaching Large Group Physical Activities, Fall 1997-  
Spring 1999

EDPE 2354 - Teaching Individual Physical Activities, Spring 1998-Spring  
1999

- Work Experience

PE Central Managing Editor, April 1998-May 1999  
Designer and editor of PE Central's Best Practices

- Service

Advisor to the Virginia Tech Physical Education Major's Club,  
August 1997-May 1999

**1993-1996                      Physical Education Teacher  
Benicia Middle School, Benicia, CA**

- Coordinative/ Administrative Responsibilities

Director of Intramurals, September 1994-June 1996

Co-Chair, Department of Physical Education, June 1995-June 1996

Site Council Member, September 1993-June 1996

President of Site Council, September 1995-June 1996

## **COACHING EXPERIENCE**

1994-1996                      Assistant Varsity Baseball Coach  
Acalanes High School, Lafayette, CA

1993-1994                      Assistant Baseball Coach  
Diablo Valley College, Pleasant Hill, CA

1990-1991                      Head Junior Varsity Baseball Coach  
Foothill High School, Pleasanton, CA

1989-1990                      Assistant Junior Varsity Baseball Coach  
James Logan High School, Union City, CA

## **PUBLICATIONS**

Pennington, T. R. & Krouscas J. A. (1999). Connecting secondary physical education with the lives of students. Journal of Physical Education, Recreation, and Dance, 70 (1), 34-39.

Graham, G., Bell, K., Doering, N., Elliott, E., Krouscas, J., Manross, M., McCollum, S., Oliver, K., Pennington, T., Person, L., Poole, J., & Westfall, S. (1997) [Review of the book Student Learning in Physical Education: Applying Research to Enhance Instruction]. Journal of Teaching in Physical Education, 17, 130-134.

Krouscas, J. A. (1997). Choosing to grow professionally. Teaching Elementary Physical Education, 8 (1), 3.

Krouscas, J. A. (1996). No substitute for the first day of school. Strategies, 10 (1), 3-8.

Garcia, R. & Krouscas, J. A. (1995). Build class community. Strategies, 9 (2), 14-18.

**INSERVICE PRESENTATIONS**

Garcia, R. & Krouscas, J. (1993). Utilizing project adventure in physical education. San Leandro Unified School District, San Leandro, CA

Krouscas, J. (1994). Enhancing your elementary physical education program. Genesis One Elementary School, Mendenhall, MS

Krouscas, J. (1996). Tips to managing a physical education class. Mary E. Farmer Elementary School, Benicia, CA

Krouscas, J. (1996). Tips to managing a physical education class. Joe Henderson Elementary School, Benicia, CA

**GRANTS**

1997 Graduate Student Assembly Grant for Graduate Student Research

**HONORS AND AWARDS**

1999 Outstanding Doctoral Student, Health and Physical Education Program, Virginia Polytechnic Institute and State University

1996 Mason McDuffie Teacher of the Year

1993 California State University, Hayward, Single Subject Student Teacher of the Year

1993 California State University, Hayward, Department of Physical Education Student Teacher of the Year

1993 Phi Kappa Gamma Scholarship for Outstanding Student Teaching

**PROFESSIONAL MEMBERSHIP**

American Alliance for Health, Physical Education, Recreation and Dance