

CHAPTER 1 THE PROBLEM

A 15-year-old student from Northeast Washington was killed when he confronted two youths about his stolen jacket in 1987, and a Southeast Washington youth was killed in 1990 when he changed his mind about giving up his designer jacket (Escobar, 1990). A young student in Fairfield, Alabama, was killed for his jacket in 1992, and youth violence that frequently occurs over designer clothes and tennis shoes continues to be “one of the most pressing social problems facing the United States today” (Holloman, 1995).

Although the overall number of violent acts committed by students has declined in many school districts, the general disciplinary problems that interrupt the teaching and learning process on a daily basis have still reached alarming rates in schools across the nation (Connolly, 1998). Attendance rates and academic achievement have waned while discipline problems have soared in public schools across the country for more than two decades. Public schools are faced with record numbers of students who are either truant on a regular basis or the source of major disciplinary problems when they are in school.

The problem is so widespread that it extends from the urban school to both suburban and rural schools (Holloman, 1995). In a national survey conducted by the National Association of Elementary School Principals (1998), the results revealed that 47% of the principals in the United States cited truancy, assaults, and acts of violence as problems in their schools. As a result, school leaders from California to Virginia are seeking innovative ways to remedy the problem. The lack of other successful means for correcting the problems has prompted school administrators, parents, and communities to try school

uniforms as a possible solution (Stanley, 1996; Hughes, 1996; Soltner, 1997; & Hoffler-Riddick, 1998).

President Clinton, in his State of the Union Address in January 1996, gave his support to school uniforms when he stated, “If it means that our young people will stop killing each other over designer jackets, schools should be allowed to require uniforms” (Clinton, 1996, p.76). Immediately following that State of the Union Address, the President recommended that a Manual on School Uniforms be sent to all 15,000 school districts (Clinton, 1996). After President Clinton’s address, more school districts implemented either voluntary or mandatory uniforms and dress codes in their attempts to improve attendance, reduce disciplinary problems, and increase academic achievement. President Clinton reaffirmed his support for school uniforms on July 20, 1998, when he “urged the nation’s second-largest teacher’s union to help him promote greater use of school uniforms . . . as an approach to restoring discipline in our schools” (Connolly, 1998). Long Beach California noted a 50% drop in the number of fights, a 22% drop in truancy, and a 34% drop in overall crime during the year following uniform implementation (U. S. Department of Justice, 1996; Stanley, 1996). President Clinton reaffirmed his commitment to school uniforms when he cited uniforms as a means of making schools safer when he addressed the United States Conference of Mayors at the Safe Schools Summit on October 14, 1998 (United States Conference of Mayors, 1998).

Locally, Ruffner Middle School, Norfolk, Virginia, noted a 34% drop in overall crime and a 23% drop in truancy during the 1996-1997 school year, after uniform implementation (Hoffler-Riddick, 1998). Hoffler-Riddick (1998) cited mandatory school

uniforms as one of the factors contributing to the improvements. School districts in twenty-one states across the nation have implemented either voluntary or mandatory uniform dress code policies as one possible way of bringing about changes.

Conceptual Context

The researcher has examined studies on the implementation of both voluntary and mandatory uniform policies and found much of the data to be inconclusive. Research studies by Stevenson & Chunn (1991); Behling & Williams (1991); Hughes (1996); Shook (1996); Stanley (1996); and Hoffler-Riddick (1998) on the effects of mandatory uniforms were conflicting in their overall results. These studies examined the impact of mandatory school uniforms on self-esteem, attendance, discipline, and academic achievement. Some of these studies have found positive effects of school uniform policies with respect to discipline and student perceptions of self-esteem, but no significant differences with respect to attendance or student achievement (see Appendix A for a list of uniform studies). Much of the data collected has also been anecdotal, so there is still a need for more empirical research to be done in the area. Several of the studies on school uniforms, including one completed by Pamela Hoffler-Riddick, were conducted on schools that had implemented other major changes at the same time. Some of the studies, such as Hoffler-Riddick's, were conducted in schools which had new facilities, new administrators, new instructional staffs, or a combination of all three. The results of the studies were limited by these variables which may have intervened and posed threats to the external validity of the studies (Campbell & Stanley, 1963).

This study differed from a previous study conducted by Pamela Hoffler-Riddick in several ways. One difference was the location of schools that were studied. The school districts and the schools were different. Hoffler-Riddick's study was conducted on a school that had just undergone a multimillion dollar renovation with state-of-the-art technology. The school was considered one of the model schools in the United States (Hoffler-Riddick & Lassiter, 1996). In addition to having a new state-of-the-art facility, the administration and much of the teaching staff were new during the first year of uniform policy implementation at that school.

The focus of this researcher's inquiry was to add to the body of knowledge that currently exists with respect to the impact of school uniforms on student attendance, student achievement, and teachers' perceptions of classroom environment as measured by attendance, behavior, academic achievement, and students' self-image (see Figure 1, Conceptual Model). The Conceptual Model identifies the major areas of focus for the study and the expected outcomes for implementing a mandatory uniform dress code policy. Historical and legal aspects of implementing a mandatory uniform policy are outlined on the left side of the model and covered in the review of literature because dress is considered a mode of expression, and opponents of uniforms claim that uniforms violate the freedom of speech (Sher, 1995; Hughes, 1996; Soltner, 1997). Adolescent development and clothing deprivation, which are also outlined on the left side of the Conceptual Model, are factors that must be considered before implementing a mandatory uniform policy (Dorman, 1985). The items on the right side of the Model are the expected outcomes for implementing a mandatory uniform dress code policy: improvements in

Conceptual Model

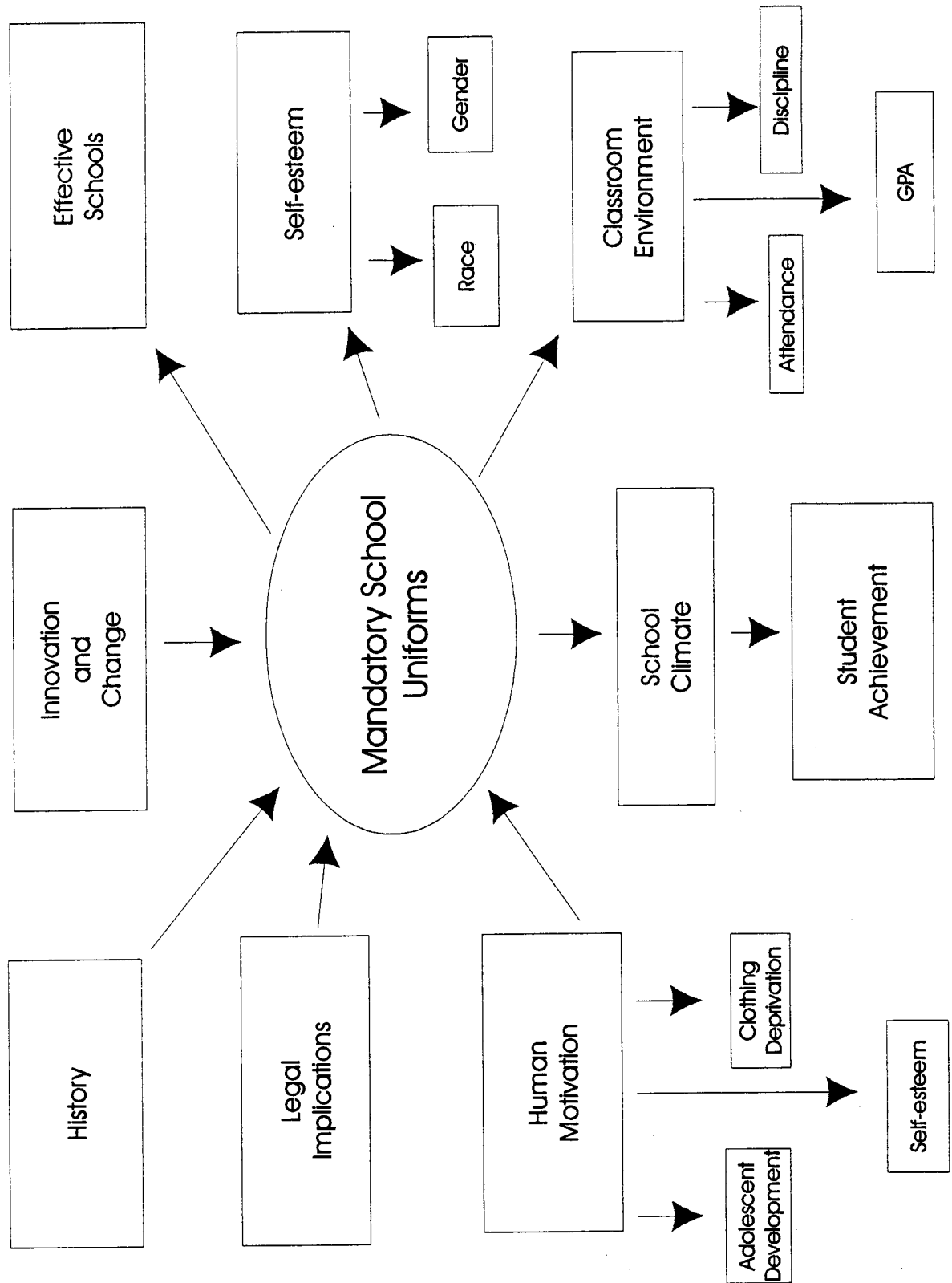


Figure 1 . Mandatory school uniforms affect self-esteem, attendance, discipline, and achievement.

student attendance, student achievement, and teachers' perceptions of classroom environment.

Significance of the Study

Further research on the implementation of school uniforms was warranted because very few research studies have been conducted in this area (Stevenson & Chunn, 1991; Hughes, 1996; Sher, 1995; Shook, 1996; & Hoffler-Riddick, 1998). Most of the studies conducted in this area have examined only voluntary uniform policies or gathered anecdotal data. A need for more empirical data exists (Holloman, 1995; Soltner, 1997). Although research on school uniforms is highly inconclusive, parents, communities, and some school leaders are convinced that school uniforms may help to improve attendance and achievement.

Statement of Purpose

Prior research studies (Stevenson & Chunn, 1991; Shook, 1996; and Hoffler-Riddick, 1998) on the effects of mandatory school uniforms have been inconclusive in their findings. The purpose of this study was to determine if there were a significant difference between gender and race with respect to student attendance, student achievement, and teachers' perceptions of classroom environment as measured by a self-report survey after implementation of a mandatory uniform dress code policy.

Overall Research Question

What is the impact of a mandatory uniform dress code policy on attendance, academic achievement, and teachers' perceptions of classroom environment?

Research Questions

The research questions addressed in this study were the following:

- (1) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?
- (2) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (3) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?
- (4) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (5) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School A?
- (6) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School B?

Definition of Terms

For the purposes of this study, the key terms are operationally defined on the following page (see Table 1).

Table 1

Operationalized Definition of Terms Used in School Uniform Study

Term	Definition
Achievement	Performance of students calculated from grade point averages (A=4, B=3, C=2, D=1, F=0). Grade point averages were used because standardized test scores (LPT, IOWA, and Stanford Nine) were not available over a two-year period.
Attendance	The number of days students were absent from school.
Adolescence	A developmental period between childhood and adulthood (usually ages 10-14) that involves physiological, emotional, social, and cognitive changes.
Classroom	Classroom conditions which include attendance,
Environment	achievement, behavior, and appearance of students as measured by results of a teacher survey.
Clothing	Dissatisfaction or discontent with dress in relation to
Deprivation	physical or psychological discomfort (Shook, 1996; Hoffler-Riddick, 1998).
GPA	Grade Point Average calculated for end-of-year grades in math, English, science, and social studies on a 4-point scale (A=4, B=2, C=3, D=1, F=0).

(table continues)

(Table continued)

Table 1

Operationalized Definition of Terms Used in School Uniform Study

Term	Definition
Self-image	Teachers' perceptions of students' feeling of value or self-worth (Shook, 1996)
Time	One year without uniforms and two years with uniforms in School A; one year without uniforms and one year with uniforms in School B.
Uniform Dress Code	Casual form of dress code that limits what students may wear to colors and styles of shirts, pants, skirts, shorts, sweaters, and shoes, all of which may be purchased by parents from vendors of their choosing (Hughes, 1996).

CHAPTER 2 REVIEW OF LITERATURE

The review of literature pertinent to this study has been divided into five categories. The first two sections examine the historical and legal aspects of implementing uniform dress code policies. The third section discusses the theoretical concept of human motivation and its impact on adolescent development. Section four examines the correlates of effective schools and the use of school uniforms to help impact three of the factors of classroom environment: attendance, discipline, and achievement. The final section of the literature review focuses on the process of innovation and change, and it examines the role of the principal as the primary agent for making innovations such as mandatory school uniform policies effective.

Historical Review

Uniforms have been worn under a variety of circumstances since early human history (e.g. military). Dress codes for students in some form have been in place since 1923 when the Court ruled in the case of Pugsley v. Sellmeyer, “It is a proper function of the school to require students to wear uniforms to school, and to prohibit the wearing of cosmetics, certain types of hosiery, low-necked dresses, or any style of clothing which may tend, according to community norms, to be immodest” (Alexander & Alexander, 1996, p.356). Although school uniforms have been accepted as normal attire for students enrolled in parochial and private schools since their inception, requiring public school students to wear uniforms is a trend that began in the 1980s (Stanley, 1996; Holland, 1997). The National Center for Educational Statistics (1996) conducted a survey which

revealed that 84% of the students enrolled in Catholic schools in the United States wear uniforms or have formal dress codes.

In 1987, Cherry Hill Elementary School in Baltimore, Maryland, made national news when it became one of the first public schools in the country to adopt a mandatory school uniform policy (National Association of Elementary School Principals, 1998). By 1989, 74% of the public schools in Baltimore had implemented policies on school uniforms. In addition to Baltimore, 32 schools in Washington, DC, 44 schools in Miami, Florida, and 30 schools in Detroit, Michigan, had implemented either mandatory or voluntary uniform policies for their elementary or middle schools by 1989 (Stanley, 1996). More than 21 states had implemented uniform policies or dress codes of some type by February 1998, and 94% of the principals surveyed by the National Association of Elementary School Principals and Lands End, Incorporated, in February stated that they would continue with their policies (NAESP & Lands End, Inc. 1998). States that offer school divisions the authority to implement mandatory uniform policies include the following: California, Georgia, Florida, Illinois, Michigan, New York, Ohio, Texas, Washington, and Virginia (NAESP & Lands End, Inc., 1998).

Dramatic increases in truancy, failure rates, and violence have prompted school leaders and parents to return to stricter dress codes or uniforms more than seventy years after the Pugsley v. Sellmeyer case of 1923. Advocates of school uniforms believe that uniforms increase self-esteem and self-image, improve attendance, and create a more serious focus on school work (Behling & Williams, 1991; Behling, 1994; Stevenson &

Chunn, 1991; Holloman, 1995; Hughes, 1996; & Shook, 1996). Those who oppose uniforms contend that uniforms engender cynicism, lead to rebellion, and deprive students of their First Amendment rights (Hughes, 1996). The opponents of school uniforms most frequently claim that students have been denied their rights to freedom of expression because of the mandated dress codes (Sher, 1995; Shook, 1996).

Legal Implications

National Implications

On the national level, the United States Supreme Court in Tinker v. Des Moines Independent School District (1990) gave students the right to freely express themselves in an academic setting, including the way they dressed, as long as their choices did not interfere with the rights of others (Majestic, 1991; Virginia Department of Education, 1992). Although advocates for student rights have argued that students have the right to look and dress as they please, and should, therefore, be protected by the Constitution, not all courts have agreed to unlimited freedom of choice with respect to student dress (Hughes, 1996; Soltner, 1997).

The Courts have banned the wearing of any gang symbols or attire that clearly identifies gang membership (Majestic, 1991). The Courts further added that schools have the authority to prescribe and control the conduct of students within the school (Soltner, 1997). Bethel v. Fraser (1986) and Hazelwood v. Kuhlmeier (1988) also gave support to the school's authority to limit the students' freedom of speech with respect to clothing or mode of dress (Alexander & Alexander, 1996). Mandatory school uniform policies were challenged in the Long Beach California Unified School District by low income families

who were represented by the American Civil Liberties Union of Southern California and the Legal Aid Foundation (Hughes, 1996; Shook, 1996; Soltner, 1997). The case was settled out of court when the school district, which had implemented mandatory school uniforms for all of its elementary and middle school students, agreed to do more to help needy families (Hughes, 1996; Soltner, 1997).

Local Level Legal Implications

In addition to national legal implications, the courts on the local level have also upheld school districts that have implemented uniform dress code policies. In Broussard v. Sch. Bd. of City of Norfolk (1992) the courts agreed with the school board's decision that the school had a right to regulate clothing that contained offensive messages (Soltner, 1997). Courts have ruled that students do have Constitutional rights with respect to dress, but they have also maintained that school boards and other school officials may restrict these rights, if necessary, to help enhance school safety and to improve the learning environment (Hughes, 1996).

Theoretical and Conceptual Framework

Theory of Human Motivation

“From the early 1930s to the recent past, human development concepts have revolved around the stress on external situations, overt behavior, and environmental events that govern that behavior” (Jordan, 1990, p. 12). Motivational theory begins with Abraham Maslow who purports that all humans have certain basic needs which include the following: physiological needs, safety needs, esteem needs, self-actualization, and satisfaction (Maslow, 1982; Shafritz & Ott, 1996). All people, including adolescents,

have a desire for self respect and for self-esteem. Satisfaction of the self-esteem needs enables an individual to feel worthy, strong, capable, and adequate (Maslow, 1982; Piaget, 1974; Shafritz & Ott, 1996).

Studies of policies such as school uniforms that impact middle school students must focus on the “theoretical and conceptual knowledge base” that surrounds adolescent development and their basic needs (Dorman, 1985; Jordan, 1993; Holloman, 1995). Self-esteem needs, which include physical appearance, self concept, and peer relations, are a primary concern of the typical middle school child (Holloman, 1995; Sher, 1995; Hughes, 1996).

Adolescent Development.

Early adolescence is a period of development during which students experience rapid physical, emotional, social, and intellectual changes (Maslow, 1982; Dorman, 1985; Jordan, 1990).

Physical development. Adolescents from 10 to 15 years of age experience dramatic changes in physical growth. Rapid or sporadic growth spurts occur at different rates and at different times for most adolescents. For females, the growth spurts occur as early as age 10, and they peak at about age 11 (Maslow, 1982; Dorman, 1985; Jordan, 1993). For males, the growth spurts begin at approximately age 11 and peak at age 14. The reproductive systems begin to mature in both males and females during adolescence. Although most adolescents get excited about these and other physical changes that make them look more like adults in physical appearance, many adolescents find the large number of physical changes in such a short span of time somewhat overwhelming (Dorman, 1985).

Emotional and social development. Having to adjust to rapid physical changes can be emotionally and socially challenging for the adolescent. News media reports and many public opinion polls portray the adolescent stage as a period of emotional and social turmoil (Jordan, 1993). Adolescents frequently experience rapid mood swings, unpredictable behaviors, and extreme needs to belong to groups (Maslow, 1982; Dorman, 1985; Jordan, 1993). They are frequently unresponsive to adults and somewhat rebellious in nature. Although adolescents frequently rebel against adults, including teachers, they also seek adult approval as well as peer approval (Forney & Forney, 1995). Peer pressure to conform to the group has a tremendous impact on decision-making and general behavior during this period of development (Behling, 1995; Forney & Forney, 1995).

The typical middle school student has a powerful need to be identified, and much of this identification is related to clothing (Jordan, 1993). Adolescents have a need to belong or to be identified with groups, and as they move from social isolation to peer acceptance, clothing becomes most important (Sher, 1995; Shook, 1996). Previous researchers are still inconclusive in their findings of the relationship among clothing deprivation, self-esteem, and social participation with respect to adolescent development, but they have concluded that appearance, peer relations, and self concept frequently are more important than grades or academic achievement for the typical middle school student (Jordan, 1993; Behling, 1991; Stevenson & Chunn, 1991; Sher, 1995).

Cognitive development. In addition to the physical, emotional, and social changes that occur during adolescence, intellectual or cognitive changes are also taking place at a

rapid rate (Piaget, 1982; Maslow, 1982; Dorman, 1985; Jordan, 1993). Adolescents may begin to think abstractly and reflectively in one area while they simultaneously continue to think concretely in others (Dorman, 1985). They begin to question and object to rules and regulations such as dress code policies both at home and at school. Conclusively, school leaders and those who make decisions that impact middle school-aged children must focus on the theory of human development and the needs of the adolescent if they plan to implement changes that will be effective, including changes such as uniform dress codes.

Clothing Deprivation

Much of the driving force for establishing uniform policies has developed from the current education reform movement and children's preoccupation with expensive designer clothes (Virginia State Department of Education, 1992). Clothing and appearance are extremely important to the young adolescent in today's society, and both factors have a significant impact on the development of self-esteem and adolescent relationships with peers (Francis & Liu, 1990; Shook, 1996). Perceived clothing deprivation has been defined as discontent with clothing in relation to peers' clothing or the feeling of not having enough clothing to be satisfied (Francis & Liu, 1990).

Francis and Liu conducted a study to investigate the relationship between clothing values and perceived clothing deprivation among adolescents. The researchers (1990) developed a questionnaire using perceived clothing deprivation as the dependent variable and clothing values as the independent variable. In the study, the researchers tested the effects of political, aesthetic, economic, sensory, social, and theoretical values on perceptions of clothing deprivation (Francis & Liu, 1990). The items were measured on a

5-point Likert scale, and the researchers administered the questionnaire to 338 high school students in home economics classes of six different schools in a Pacific Northwestern state.

Pearson Product-Moment Correlations and multiple regression were used to determine if there were significant relationships between perceived clothing deprivation and clothing values (Francis & Liu, 1990). The researchers found significant positive correlations between perceived clothing deprivation and poor self-esteem on four of the eight clothing values tested. Their study also concluded that peer approval had a significant impact on an adolescent's feelings of clothing deprivation.

Self-esteem. Self-esteem has been defined by Shook (1996) as the positive or negative attitudes that an individual feels about himself. "Satisfaction of self-esteem needs leads to a feeling of self-confidence, worth, strength, capability, and adequacy of being useful and necessary in the world" (Maslow, 1982; Shafritz & Ott, 1996, p.168).

Shook (1996) conducted a study with 700 sixth-grade students in nine Florida middle schools to determine if there were significant relationships among clothing deprivation, self-esteem, and social participation of young adults. The study also examined the impact of perceptions of clothing deprivation based on gender, race, and socioeconomic status. The Coopersmith Self-Esteem Inventory was administered to all participants in the sample. The 58-item self-esteem inventory consisted of four subscales designed to measure attitudes toward the self in social, academic, family, and personal areas of experience (Shook 1996). Pearson Product-Moment Correlations and Analysis of Variance tests with a predetermined alpha of .05 were used to analyze the data. The

overall self-esteem scores for the sample ranged from 18 to 100 with a mean score of 74.7 and a standard deviation of 17.2 ($M = 74.7$; $SD = 17.2$). The results of the study revealed significant negative relationships between feelings of low self-esteem and clothing deprivation. In other words, the students with high self-esteem did not feel deprived by the inability to buy clothes (Shook, 1996). Analysis of Variance was used to analyze any significant difference based on three demographic variables: race, gender, and socioeconomic status (Shook, 1996). Shook's analyses found no significant differences in perceptions of clothing deprivation related to gender, race, or socioeconomic status (SES).

Effective Schools

After the Coleman Report (1962) and A Nation at Risk (1983), school leaders and governments examined resources, school effects, and strategies for changing educational systems and individual schools (Silver, 1993; Hughes, 1996). The transitions that students must make as they change from an elementary to a middle school or secondary school environment can be "instructionally and socially complex" for students who are already dealing with physiological, psychological, and emotional changes and complexities (Jordan, 1993; Shook, 1996; Hillman, 1991). Effective schools for young adolescents are usually those schools that promote both personal and social development (Spring, 1991). Researchers in the early eighties (Spring, 1991) determined that a positive school environment in which students felt safe and secure was listed by parents and students as a primary criterion for effective schools (Spring, 1991). The correlates of effective schools identified by Edmonds (1982) include the following: (1) strong

leadership, (2) a safe, orderly environment, (3) frequent monitoring of student progress, (4) high expectations and requirements for all students, and (5) focus on teaching important skills to all students (Spring, 1991; Shepherd, 1998).

School Environment

One of the primary goals of the effective schools movement is to create safe and orderly environments. According to Edmonds (1982) effective schools should have an atmosphere that is orderly, and the environment must be conducive to the instructional process. The National Commission on Excellence in Education (1983) conducted a study on parents of middle school-aged children which concluded that parents wanted schools to provide safe, orderly environments, challenging academic standards, and assistance with their children's social development skills (Shepherd, 1998). Although schools have initiated numerous policies to become more effective within this decade, attendance and discipline problems still abound in record proportions (Hughes, 1998).

Attendance

School districts, including the District of Columbia, have implemented uniforms to help improve attendance and discipline as well as academics. Stevenson and Chunn (1991) conducted a study of all elementary and middle schools in the District of Columbia that were implementing uniform dress codes or planning to implement uniform policies to determine the impact on the learning environment. Information was drawn from 301 principals and teachers and 268 parents. Their study found that parent and teacher perceptions of school uniforms were positive although there was no statistical significance

of improved attendance or achievement as a result of school uniforms (Stevenson & Chunn, 1991).

Behavior

Hughes (1996) completed a study to determine the effects of mandated school uniforms on attendance, behavior, and classroom environment. The researcher collected attendance and discipline referral data from school district records and administered a uniform opinion survey to teachers, parents, and students in two middle schools in Houston, Texas. Each school had an enrollment of approximately 1100 students, all of whom were included in the sample (Hughes, 1996). In her study, descriptive statistics (percents) were used to describe attendance patterns, and a discipline referral ratio was drawn between the number of referrals and the number of students enrolled in each of the schools. Results of the study revealed significant differences in the number of student referrals; that is, student referrals decreased significantly after the implementation of mandatory school uniforms (Hughes, 1996). Surveys were administered to teachers, administrators, and a sample of parents from each school in the fall and the spring of the same school year to determine if uniforms had an impact on their perceptions of student behavior. School staff participants indicated the percentage of students in their classes that exhibited certain behaviors, and the researcher analyzed the data revealed on the surveys (Hughes, 1996).

Hughes used analysis of variance and t-tests to analyze the results of the surveys (1996). For the Spring Faculty Survey, the overall mean for behavior was 3.15 with a standard deviation of 0.75 ($M=3.15$; $SD=.75$), indicating that teachers rated uniforms as

having a positive impact on student behavior (Hughes, 1996). The researcher's computer calculated probability levels for sex and experience of the participants were 0.62 and 0.12 respectively, both of which were higher than the researcher's predetermined alpha level of .05, so the researcher failed to reject those two null hypotheses (Hughes, 1996). In other words, there was no difference in the faculty ratings with respect to their own sex or years of experience. The computer calculated probability level of 0.001 for schools revealed a significant difference between the two schools (Hughes, 1996). Teachers in school B rated their student behavior higher than the teachers in school A after nearly one year of uniform implementation (Hughes, 1996).

Achievement

Behling (1994; 1995) conducted studies on the impact of school uniforms on perceptions of students' academic ability in Bowling Green, Ohio, Public Schools. Conducting a study with 270 students and twenty teachers from a public high school and a private school, Behling (1994) used photographs of models wearing different types of uniforms, formal dress, and informal or casual attire. Four clothing styles, including two styles of school uniforms, were photographed, manipulated, and presented to the sample populations from both high schools (Behling, 1994). The researcher's independent variables were gender, school, and styles, and the dependent variables were behavior, scholastic achievement, and perception of academic potential (Behling, 1994). Using a repeated measures analysis of variance, the researcher found significant differences and used Tukey's post hoc test to determine where the specific differences actually occurred (Behling, 1994). The study concluded that school uniforms or uniform styles of dress

positively influence the perception of academic ability and school-related behavior in both public and private schools (Behling, 1994).

Behling's studies (1991; 1994) found significant differences between groups based on clothing styles and gender of the models. Males in uniform and informal dress were perceived by both groups as having higher academic potential than females (Behling, 1994). The difference in perception of ability was even more profound for males. In other words, the participants in the study rated males in uniforms or a uniform mode of dress as having higher ability than females with similar dress (Behling & Williams, 1991; Behling, 1994). That study also revealed a significant difference between gender with respect to a uniform mode of dress. Males who were dressed in both the formal and the less formal mode of dress were perceived as having higher academic ability and higher leadership qualities by both faculty and students (Behling, 1991; 1994).

Discipline

President Clinton applauded the Long Beach Unified School District for having been the first school district to implement mandatory uniforms for all of its elementary and middle school students (Stanley, 1996; Paliokas & Rist, 1996). Long Beach implemented mandatory uniforms for all of its 60,000 elementary and middle school students in the fall of 1994. Stanley (1996) conducted a longitudinal study on the impact of mandatory uniforms in the Long Beach schools after the implementation of uniforms, and her study revealed significant differences in truancy, fights, and assaults. In the year following implementation of the uniform policy, the district noted a 51% drop in the number of fights, a 34% drop in assault and battery cases, and an overall decline of 36% in violent

acts, according to Long Beach School District leaders and police officers (Stanley, 1996; U. S. Department of Justice, 1996).

On the local level, Ruffner Middle School, Norfolk, Virginia, which implemented its uniform policy in 1994, noted a 37% drop in discipline infractions after uniform implementation, and the research study concluded that the mandatory uniform dress code was at least one of the variables that may have had an impact on the improvements (Hoffler-Riddick, 1998). In recent years, other local school districts, including Newport News and Virginia Beach, have also implemented either voluntary or mandatory uniform policies in some of their schools to help increase attendance, reduce disciplinary infractions, and improve academic achievement (Soltner, 1997; Hoffler-Riddick, 1998).

Innovation and Change

Large scale innovation and reform in educational processes nationwide began in the early sixties, and they were given an impetus with the publication of A Nation at Risk in 1983 (Fullan, 1991; Fullan, 1993). “Deteriorating social conditions continue to widen the gap between the haves and the have nots” (Fullan, 1993, p. 5) in our schools as well as in the work place. As social conditions continue to expand, public school populations become more diverse and more challenging for school leaders. Technology is rapidly changing our schools and the work place, and all aspects of society are expecting more from school leaders (Fullan, 1993). Sociological changes have pressured educators to seek changes in the way schools operate in order to be more effective (Fullan, 1993). Through trial and error of constantly experiencing attempts at school reform, research has concluded that planned educational change is a highly complex endeavor (Fullan, 1993).

“Educational change is a sociopolitical process . . . that involves all kinds of individual, school, local, state, and sometimes national factors working together to bring about school improvement” (Fullan, 1993, p.16) and desired results in student behavior and achievement. Many of the innovations of the 1970s were implemented for short periods of time before being disbanded (Fullan, 1993). The critical report, A Nation at Risk, in 1983, sparked educational institutions across the United States to seek more reforms (Fullan, 1993). Fullan (1993) contends that educational innovations and reform have gone through at least four phases since 1960: adoption, implementation failure, implementation success, and intensification or restructuring. Educational innovations and change must be studied and evaluated based on the specific values, goals, and outcomes they are expected to achieve. Much of the change process, if it is to be effective and have a lasting impact, must involve a change in attitude rather than a change in overt behavior (Rogers, 1982; Fullan, 1993).

Diffusion of Innovation

Rogers (1982) defines innovation as an idea, object, or practice that is perceived as new by an individual and “diffusion of innovation” as a social process in which subjectively perceived information or a new idea is communicated. The diffusion of an innovation is the process by which all of the major stakeholders in the change process share information about the change and how it will operate within the social context of an organization such as a school (Rogers, 1982; Fullan, 1993; Soltner, 1997). According to Rogers, when new ideas are invented, diffused, adopted, or rejected, social change occurs. Rogers (1982)

extends his definition of diffusion to include “the process by which (1) an innovation (2) is communicated (3) over time (4) among the members of the social system” (p. 10).

The Principal as a Change Agent

School leaders must be cognizant of the fact that the manner in which an individual perceives an innovation will determine whether or not he will accept or reject it. The standard role of a change agent is to diffuse innovation to all clients and stakeholders of the organization, but this must be a two-way communication process if the innovation is to be successful (Rogers, 1982; Schaller, 1982; Soltner, 1997). According to Rogers (1982), the change agent must be willing to work with clients, determine a need for change, diagnose the problem, implement the change process, stabilize the change process, and develop a relationship that will enable clients to become self-reliant in implementing the process. Fullan (1993) further added that effective change is a process that develops over a minimal period of two years.

In recent years, school districts across the country have initiated and implemented a vast array of changes in their attempts to improve attendance, reduce discipline infractions, enhance academic achievement, and foster more positive classroom and school environments. Maehr (1992) concluded that school leaders must be motivators for innovation and change among teachers and students. Innovations and bold initiatives occur rarely, but it is those “day-to-day, routine, interpersonal contacts” that enable principals to change classroom environments and school climate (Maehr, 1992). The principal, as a change agent, influences a critical facet of the school’s climate and culture by establishing an environment that is conducive to learning (Maehr, 1992).

The authors characterize effective school leaders as those who create favorable “psychological environments” by operating in a theoretical framework to bring about meaningful change. The changes must be goal and mission-centered, and those goals should be established with motivational policies, practice, and procedures that impact student achievement (Rogers, 1982; Maehr, 1992; Fullan, 1993). The principal, as the change agent, must be certain that a policy change, such as a mandatory uniform dress code, involves all stakeholders: local school board, central office administrators, other building administrators, teachers, students, parents, and the community if the process is to be successfully implemented with a lasting effect (Fullan, 1993; Soltner, 1997).

Summary

Prior research studies (Stevenson & Chunn, 1991; Behling, 1991, 1994; Hughes, 1996; Shook, 1996; Soltner, 1997; Hoffler-Riddick, 1998) on the implementation of school uniforms as an innovation or policy change to help improve student attendance, behavior, and academic achievement are inconclusive and inconsistent in their findings. Changes that are made to improve the classroom environment must be carefully researched and well planned if those changes are to have a significant impact (Fullan, 1993). School leaders need more data before determining if they wish to implement innovations such as mandatory school uniforms. This research study will add to the body of knowledge on the impact of mandatory school uniforms.

CHAPTER 3 METHODOLOGY

The methodology used to study the impact of mandatory school uniforms on student attendance, student achievement, and perceptions of classroom environment in two urban middle schools is described in this chapter. This quantitative, causal comparative study (Miles & Huberman, 1994) examined the relationships between a mandatory uniform dress code policy and attendance, academic achievement, and perceptions of classroom environment. The chapter includes a description of the setting, population and samples, design, data collection procedures, and threats to internal and external validity.

A request to conduct the study was submitted to the school division in which the researcher conducted the study, and the researcher was granted permission to conduct the study by the Superintendent and the Director of Human Resources for the school division. Approval to conduct the study was also granted by the Institutional Review Board of The Virginia Polytechnic Institute and State University.

Setting

Portsmouth Public School System is a medium-sized school division located in southeastern Virginia. Approximately 18,000 students are enrolled in the 31 schools that comprise the division. The schools in the study are two of the four middle schools in the urban school division. According to school division records (Virginia Department of Education, 1997), both schools (School A and School B) have similar demographics.

School A

School “A” enrolls approximately 1200 students with the following ethnic composition: approximately three-fourths of the students are African American; approximately one-fourth are Caucasian; and less than two percent are other. The magnet school is a component of School A, and it houses approximately 400 students, many of whom are actually zoned for attendance at the other three middle schools (see Table 2 for school data profiles). The magnet school component accounts for much of the difference in the total enrollment numbers for the two schools (1200 contrasted with 800 students). Approximately two-thirds of the students in School A are classified as having low socio-economic status based on the number of students eligible for either free or reduced-price lunch. School data profiles revealed that approximately one-half of the students missed 10 or more days from school during the 1995-96 school year based on the State’s Outcome Accountability Project report (1997).

The student population in School A has remained relatively stable during the three-year period examined in the study. Although School A had been under the leadership of three different principals for three years prior to uniform implementation, the assistant principals and most of the teaching staff had remained the same. Both the administrative and teaching staff remained stable in School A from 1995 -1998.

Table 2

Data Profiles for Eighth Grade Students in Schools A and B

	Race/ Ethnicity				Free & reduced-price lunch		Total Absence		8th grade enrollment	Total enrollment
	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>n</u>	<u>%</u>	<u>N</u>	<u>N</u>
School A	260	71	100	27	222	61	192	45	364	1200
School B	165	66	77	31	186	72	112	56	249	800

*Attendance is determined by the number of students absent from school for 10 or more days.

School B

The entire administrative staff for school B remained stable for two years prior to uniform implementation. The teaching staff also remained fairly stable for two years prior to this study although the student enrollment for School B declined remarkably within the two-year period prior to and during uniform implementation. Most of this decline in enrollment resulted from a change in housing patterns within the school zone. Many of the apartments and low-income single family dwellings that were within the attendance zone for School B were condemned and demolished during the 1995-98 period. Many of the families have relocated to other attendance zones within the city or moved to other cities as a result. The change in housing and redevelopment resulted in a substantial decline in student enrollment in School B between 1995 and 1998.

Approximately two-thirds of the students in School B were African-American, and approximately one-third of the students were Caucasian. Less than two percent of the students in School B are classified as Hispanic or other, and they were eliminated from the study. Nearly two-thirds of the students in School B were classified as having low socio-economic status based on the number of students eligible to receive either free or reduced-price lunch. School data profiles revealed that more than one-half of the students missed 10 or more days from school during the 1996-1997 school year, the year prior to uniform implementation (State Outcome Accountability Project, 1997).

Populations and Samples

The participants in this study were students who were enrolled in the schools during the base-line year for uniform implementation (see Table 3 for populations and samples of

uniform use) and teachers who taught in the schools prior to and during uniform implementation. The student population for school A were students in the eighth grade during 1997-98 who had completed three consecutive years there from 1995-96 through 1997-98. From the population of 364 eighth-grade students enrolled in the school during 1997-98, a stratified minimum sample of approximately 120 students (Weiss, 1995) were selected as the participants for School A. An equal number of 30 students for each gender and race comprised the minimum sample for School A.

The students in school B were enrolled during the 1996-97 school year, which was the base-line year for uniform implementation. There were 130 students enrolled in grades six, seven, and eight at School B who were enrolled in the school prior to uniform implementation (1996-97). One student who was enrolled in School B during the baseline year was a sixth grade student, and he was excluded from the sample. This student was excluded from the sample because he had remained in the same grade for three consecutive years. The 129 currently enrolled seventh and eighth grade students who were in the school for three consecutive years comprised the population and the sample for School B (see Table 4 for gender and race/ethnicity of minimum sample and population of students).

Table 3

Seventh/Eighth Grade Populations, Samples, and Uniform Use by Participating Schools

School	95-96	96-97	97-98	Population <u>N</u>	Sample <u>n</u>
School A	No uniforms	Uniforms	Uniforms	364	120
School B	N/A	No uniforms	Uniforms	129	129*

*Total population and sample of students enrolled in School B before and after uniform implementation with the exception of one sixth grade student who was excluded from the population.

Table 4

Gender and Race/Ethnicity of Minimum Samples for Students in Schools A and B

	Males				Females				Total	
	Black		White		Black		White		N	%
	N	%	N	%	N	%	N	%		
School A	30	25	30	25	30	25	30	25	120	100
School B	45	35	19	15	45	35	20	15	129	100

Teachers who taught in the schools before the implementation of school uniforms and who continued to teach in the schools during the three-year period (1995-98) for School A and the two-year period (1996-98) for School B comprised the faculty population for the self-report questionnaire (see Table 5 for gender and race/ ethnicity of the faculty populations).

Data Collection

The Measurement of the Variables

The three dependent variables measured were attendance, achievement, and teachers' perceptions of classroom environment before and after the implementation of mandatory uniforms. Attendance and achievement data were gathered from students' report cards. A self-report questionnaire was used to measure the dependent variable of classroom environment. Data on the independent variables, gender and race/ethnicity, were collected from school data profile sheets.

Attendance

Because the school division did not have centralized records of attendance data for middle school students over the three year period, the report cards of the students were used as the source of data on attendance. Attendance was reported for all schools in the district as the number of days students were absent during the school year (State Outcome Accountability Project, 1997); therefore, school report cards were used to calculate the total number of days absent for all of the students in the samples and populations. Student attendance based on the number of days absent was calculated for three consecutive years (1995-1998) for students in School A and for two consecutive years (1996-98) for students in School B.

Table 5

Gender and Race/Ethnicity for Faculty Samples in Schools A and B

	Males				Females				Total	
	Black		White		Black		White		N	%
	N	%	N	%	N	%	N	%		
School A	13	16	16	20	25	31	27	33	81	100
School B	5	8	18	28	18	28	23	36	64	100

Achievement

Report cards of the students in the samples were used to calculate the grade point averages of the students before and after uniform implementation. Students' final grade point averages in the four academic courses of math, English, science, and social studies for each of the three years in School A and for each of the two years in School B were calculated using a 4-point scale (see Table 6 for grading scale used by the school division and individual schools).

Perceptions of Classroom Environment

Development of the questionnaire. The self-report questionnaire, using the Likert scale of measurement, was developed to examine the impact of school uniforms on classroom environment as determined by the perceptions of classroom teachers. Surveys used by previous researchers (Hughes, 1996; Shook, 1996) were examined, and procedures outlined in Dillman (1978) were used to assist the researcher in survey construction. Permission to use the surveys was obtained by the researcher (see Appendix E).

Through a review of the literature, previously used surveys (Hughes, 1996), and brainstorming with fellow educators, 33 items were developed for the questionnaire. Each item was carefully reviewed to ensure that it would fall into one of the four domains that would be easily interpreted by educators as factors of classroom environment. Those

Table 6

Grading Scale for Student Achievement in Math, English, Science, and Social Studies

Letter Grade	Numerical Equivalent
A	4.0
B	3.0
C	2.0
D	1.0

domains are teachers' perceptions of student attendance, behavior, achievement, and self-image (see Table 7 for definitions of questionnaire items within each domain).

Content Validity of the Questionnaire

School administrators in a dissertation seminar class were used to check the content validity of the questionnaire (see Appendix B for original questionnaire items). The questionnaire items were assessed in three areas: domain relevance, strength of association with the domain, and clarity of the item. The first rating indicated which of the four domains the respondent felt the item best described (i.e., attendance, behavior, achievement, self-image). The second rating indicated how strongly the respondent felt the statement was associated with the domain selected, and the third rating indicated how clearly the respondent felt the statement was written. The selection of the domain items required the respondent to select the most appropriate category for each of the items: perceptions of attendance, behavior, academic achievement, or self-image. The association rating ranged from 1 - 4, where one represented a weak rating and four represented a very strong rating. The clarity rating was 1-3, where one meant "not clear" and three meant the item was "very clear."

The data for the content validation of the questionnaire was entered into a computer database using the Statistical Package of Social Sciences (SPSS, 1996), and the frequencies, means, and standard deviations were calculated for each of the 33 items in the questionnaire. A table was prepared with the descriptive statistics and the domain selections based on those results (see Appendix C for validation results).

Table 7

Domains for Uniform Use and Classroom Environment Questionnaire

<u>Domains</u>	<u>Definitions</u>
1. Attendance	Teachers' perceptions of students' absence during the school year.
2. Behavior	Teachers' perceptions of students' compliance with classroom rules.
3. Achievement	Teachers' perceptions of students' completion of homework, classwork, and assessments.
4. Self-image	Teachers' perceptions of students' general feelings about their attire.

The researcher determined that items which received 70 percent or more of the ratings for a domain would be included under that domain in the revised questionnaire. Four items (A, B, L, and M) loaded at 70 percent or greater for the attendance domain, and they were entered on the new questionnaire without revision under Section 1: Attendance. One other item (*V) that did not receive 70 percent of the participants' vote was revised as suggested by the panel of experts and entered on the new instrument under the attendance domain, the area in which it received the highest rating. Eight items (BB, H, I, T, U, X, Y, and DD) received a 70 percent rating for the Behavior domain, so they were entered on the new questionnaire under Section 2: Behavior. One other item (*CC) did not receive a 70 percent rating and was revised as recommended by the panel. It was then added to the Behavior domain. Four items (C, D, Q, and Z,) loaded at 70 percent or better in the academic achievement domain, and they were entered under Section 3 of the instrument. Two other items (*P and *R) were revised, as recommended, before they were added to Section 3. Five items (J, K, O, S, W, and AA) loaded at 70 percent or better in the domain for self-image, and they were entered under Section 4: Self-image. Two items (F and FF) were deleted from the final instrument because they loaded under two or more factors (see Table 8 for item selections from the content validation results). The final questionnaire appears in Appendix D.

Distribution and return of the questionnaire. All teachers who worked in School A for four consecutive years and those teachers who worked in School B for three consecutive years were surveyed to determine if there were a difference in their perception of classroom environment after the implementation of mandatory uniform dress code

policies. Convenience sampling was conducted using those classroom teachers present on the day the survey was administered in both schools. These were the teachers who worked in the schools prior to mandatory uniform implementation.

Data Analysis and Organization

Descriptive statistics (means, standard deviations, frequencies, and percentages) were calculated for all the variables. Means and standard deviations were calculated for student attendance and grade point averages for 1995-98 for School A and for 1996-98 for School B. Means and standard deviations were calculated for teachers' perceptions of student attendance, achievement, behavior, and self-image. Frequencies and percentages were calculated for students' and teachers' gender and race/ethnicity. Frequencies and percentages were also calculated for teachers' years of teaching experience.

Repeated Measures Analysis of Variance was used to determine the relationships between mandatory uniforms and the dependent variables attendance and student achievement in School A, and ANOVA was used to determine the relationships between the variables in School B. A simple contrast was used to determine where significant differences actually occurred among the variables in School A. A body of educators was used to test the instrument for content validity (see Table 8), and items borrowed from a previous researcher were tested for reliability by that researcher (see Appendix E). Three-way Analysis of Variance was used to study the relationships between teachers' perceptions of student attendance, achievement, behavior, and self-image and teacher gender, race/ethnicity, and years of teaching experience.

Table 8Questionnaire Items Selected After Content Validation

 Section 1: Perceptions of students' absence

Content	Item stem
A	1. Students in school uniforms are absent from school more often.
B	2. Students in uniforms skip class less frequently.
L	3. Students in uniform report to school everyday.
M	4. Students in uniform come to school on time.
V	5. Students in uniform are absent from class more frequently.

 Section 2: Perceptions of students' behavior

BB	6. Students in uniform are more courteous toward their teachers.
CC	7. Students in uniform are more courteous to their peers.
H	8. Students in uniform are more willing to follow directions.
I	9. Students in uniform relate well to their teacher.
T	10. Students in uniform are more receptive to teachers' directions.
U	11. Students in uniform talk back less often.
X	12. Students in uniform are more respectful.
Y	13. Students in uniform are willing to resolve conflicts without fighting.

(table continues)

(Table 8 continued)

Questionnaire Items Selected After Content Validation

 DD 14. Students in uniform are less receptive to teachers' directions.

 Section 3: Perceptions of students' academic achievement

Content	Item stem
*P	15. Students in uniforms are less serious about learning.
D	16. Students in uniforms are more serious about learning.
Q	17. Students in uniforms make higher grades in general.
Z	18. Students in uniforms achieve higher grades on classroom assessments.
C	19. Students in uniforms are more actively involved in the lesson.
*R	20. Students in uniforms complete class assignments more often.

 Section 4: Perceptions of students' self-image

J	21. Students in uniforms take pride in the way they look.
K	22. Students in uniforms compete less for designer clothes.
O	23. Students in uniform come to class well groomed.
S	24. Students in uniforms have sufficient choices of clothes.
W	25. Students in uniforms have higher self-esteem.

(table continues)

(Table 8 continued)

Questionnaire Items Selected After Content Validation

AA	26. Students in uniforms feel good about their appearance.
*GG	27. Students in uniforms compete more for designer clothes.
*EE	28. Students in uniforms feel they are denied their rights to freedom of expression.

The overall research question was: What is the impact of mandatory uniform dress code policies on student attendance, student achievement, and teachers' perceptions of classroom environment?

Research Questions

The six major research questions addressed in this study were the following:

- (1) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?
- (2) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (3) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?
- (4) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (5) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School A?
- (6) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School B?

CHAPTER IV

FINDINGS AND DISCUSSION

The purpose of this study was to examine the impact of mandatory uniform dress code policies on student attendance, student achievement, and teachers' perceptions of classroom environment in two middle schools. The findings that resulted from the statistical analyses of the data using Statistical Package for Social Sciences (SPSS, 1995) are included in this chapter. Repeated Measures Analysis of Variance was used in School A and ANOVA was used in School B to determine if there would be significant relationships among the variables of gender, race, and time with respect to student attendance (days absent) and student achievement (grade point average). Three-way ANOVA was used to determine if there would be significant relationships among gender, race/ethnicity, and years of teaching experience with respect to teachers' perceptions of classroom environment after a change to uniform styles of dress. Results of the data analyses were organized around six major research questions:

- (1) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?
- (2) Is there a change in student attendance with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (3) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School A?

- (4) Is there a change in student achievement as measured by grade point average with respect to race/ethnicity and gender after the implementation of a mandatory uniform dress code policy in School B?
- (5) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School A?
- (6) Are there differences among race, gender, and years of teaching experience with respect to teachers' perceptions of the impact of school uniforms on classroom environment in School B?

Attendance for School A

The first question regarding the attendance patterns for students in school A after the implementation of a mandatory dress code policy was analyzed by examining school report cards to determine the total number of days absent per student for one year prior to uniform implementation, the base line year (1995-96), and the total number of days absent per student for two consecutive years after uniform implementation. Descriptive statistics were used to calculate the Mean Daily Attendance based on the number of days absent and the Standard Deviations for three consecutive years. The number of days absent was used rather than the days present because schools in the district and the State are graded with annual report cards in the Outcome Accountability Project by the number and percentage of students who miss 10 or more days out of the school year (Virginia Department of Education, 1997). There were inconsistent differences between gender and race/ethnicity with respect to average daily absence, and there was a wide range of variability in the total

number of days absent per student. Some students in the sample of Black males were absent 0 days while there were other students in the sample who were absent a total of 78 days during the baseline year, 1995-96. The mean absence for Black males was 11.97 with a standard deviation of 14.27 for 1995-96 (see Table 9). The mean daily absence for Black males showed a significant decline for the first year with uniforms (1996-97), but the absences rose again for the second year with uniforms (1997-98). The Hawthorne effect or the novelty of wearing uniforms may have been a factor in the decline of absences for Black male students during the first year with uniforms, but the significant increase in the number of days absent cannot actually be explained. Another study should be done to see if there is a trend and if that trend differs by race/ethnicity and gender.

The mean absences for Black females showed a significant increase for both the first and second year with uniforms in School A. The trend for students in the sample is similar to trends for Black females in the school which is a higher number of days absent for Black females as they progress through the upper grades in school. Students in this sample and in the school's population are older and absent more frequently as a result of teenage pregnancies that are more likely to occur in the upper grades. The mean absences for the 60 Black students in the sample decreased for the first year with uniforms primarily as a result of the large decline in absences for Black students during the first year with uniforms in School A (see Table 10).

The mean absences for White male students showed a slight decline for the first year with uniforms, but absences showed a significant increase for the second year with

Table 9

Mean Daily Absence by Race, Gender, and Year for School A (N = 120)

<u>Race/Ethnicity</u>	<u>Gender</u>	<u>n</u>	<u>95-96</u>		<u>* 96-97</u>		<u>* 97-98</u>	
			<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Black	Male	30	11.79	14.27	7.97	8.84	12.03	12.92
	Female	30	5.50	5.38	7.07	9.32	13.73	18.34
White	Male	30	6.63	9.74	6.33	7.71	11.83	18.98
	Female	30	5.43	5.76	4.02	5.75	8.53	9.48
Total		120	7.30	9.68	6.34	8.06	11.53	15.38

* Uniforms worn

Table 10

Mean Daily Absence by Race/Ethnicity, Gender, and Year of Attendance for School A (N = 120)

Race/ethnicity	N	1995-96		* <u>1996-97</u>		* <u>1997-98</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Black	60	8.68	11.01	7.55	8.95	12.90	15.66
White	60	6.03	7.96	5.18	6.88	10.98	14.97
Total	120	7.36	9.66	6.37	8.04	11.54	15.32
Gender							
Male	60	9.25	12.26	7.18	8.22	11.95	16.01
Female	60	5.47	5.52	5.55	7.83	11.13	14.71
Total	120	7.36	9.66	6.37	8.04	11.54	15.32

* Uniforms worn

uniforms. There was a high degree of variability in the number of days absent for White males during the 1997-98 school year with some students missing up to 88 days. This large variability is indicated by the large standard deviations ($M=11.83$, $SD=18.34$). The trend for students in the sample is consistent with the trend for the White male student population in the school which experiences a higher number of days absent as the students progress through the upper grades. Students in the eighth grade are more likely to be truant from school and to drop out in the eighth grade rather than in the sixth or seventh (Virginia Department of Education, 1997).

The mean absences for White female students showed a significant decline for the first year with uniforms, but the absences increased significantly during the second year with uniforms. This pattern is similar to the pattern for Black males and White males. The novelty of wearing uniforms may have had an impact on the days absent for White females, but the significant increase for the second year cannot be explained. The pattern for the sample is consistent with the trend in the school, which is an increase in the number of absences for female students during the eighth grade year. The increase in absences during the eighth grade year may have been impacted by teenage pregnancies and more suspensions.

There were inconsistent differences between gender and race/ethnicity with respect to attendance after collapsing across time for students in School A after the implementation of mandatory uniform dress code policies. The mean absences for Black males, White males, and White females showed a decline after the first year with uniforms, but an

increase after the second year. The mean score for absences for Black females showed a significant increase for both years, which is a significantly negative impact that cannot be explained except for the consistency with absentee trends for the school's Black female population. The mean absences for male students were higher than the mean absences for female students, and this is also a trend for the population of the school as students progress the upper grades. Black students and male students were absent more frequently for each of the three years in the study. The grand mean score for daily absence for all students in the sample was 7.34 with a standard deviation of 9.68 for 1995-96, the baseline year. Between 1995-96 and 1996-97, there was an overall decline in the number of absences, but there was a significant increase overall for the 1997-98 school year.

Repeated measures Analysis of Variance was used to determine if there were differences between race/ethnicity and gender with respect to attendance after the implementation of a mandatory uniform dress code policy in School A. The ANOVA revealed a significant difference over time between the baseline year and the first year with uniforms (see Table 11). A simple contrast was also employed to determine where significant differences occurred between the subjects with respect to attendance. Transformed Variable 1 compared the number of days absent from 1995-96 to the days absent for 1996-97 while Transformed Variable 2 compared the number of days absent from 1995-96 to the days absent for 1997-98. Using a simple contrast also revealed a significant difference between race/ethnicity and gender over time with respect to attendance with a confidence level of .05 (see Table 12).

Table 11

Summary of Analysis of Variance with Repeated Measures of Attendance from 1995-96 through 1997-98 Based on Race/Ethnicity and Gender for School A (N = 120)

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Race	.11	1	.11	.01	.97
Gender	129.07	1	129.07	.14	.71
Race x Gender	10.40	1	10.40	1.18	.28
Error	12615.10				
Within -Groups					
Time	1046.12	1	1046.20	9.54	.03*
Time x Race	2.08	1	2.08	.03	.86
Time x Race x					
Gender	10.40	2	10.40	.14	.71
Total Error	8585.82				

$p \leq .05$

Table 12

Tests of Within Subjects using a Simple Contrast for Attendance on School A (N = 120)

<u>Source</u>	<u>Transformed Variable</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Attendance	Attendance 1	1046.20	1	1046.20	9.54	.03*
	Attendance 2	755.88	1	755.88	10.12	.02*
Attendance x Gender	Attendance 1	129.07	1	129.07	1.18	.28
	Attendance 2	9.01	1	9.01	.12	.73
Attendance x Race/Ethnicity	Attendance 1	.11	1	.11	.001	.97
	Attendance 2	2.08	1	2.08	.028	.87
Attendance x Gender x Race	Attendance 1	378.66	1	378.66	3.45	.07
	Attendance 2	10.40	2	10.40	.14	.70
Error (Attendance)	Attendance 1	12615.1	115	109.70		
	Attendance 2	8585.82	115	74.65		

$p \leq .05$

Note: A simple contrast was employed to determine where significance lay for within subjects. Transformed Variable 1 for attendance compared 1995-96 to 1996-97, and Transformed Variable 2 for attendance compared 1997-98 to 1995-96.

There was a slight increase in the attendance rates for Black males, White males, and White females during the first year after uniform implementation which may have resulted from the Hawthorne effect. Absences for Black females increased both years after uniform implementation. The novelty of wearing uniforms may have positively impacted the attendance patterns for three of the groups during the first year of wearing uniforms, but other variables may have also had an impact on the lack of consistency and the overall increase in absences during the second year. Another study should be done on School A to determine if there is a trend in the attendance patterns.

Attendance for School B

The second question regarding the attendance patterns for students in School B after the implementation of a mandatory uniform dress code policy was analyzed by examining report cards to determine the total number of days absent per student for one year prior to uniform implementation, the base line year (1996-97), and the total number of days absent per student for one year after uniform implementation (see Table 13). Descriptive statistics were used to calculate the Mean Daily Attendance (based on the number of days absent) and the Standard Deviation for two consecutive years by gender and race. The mean absences decreased for Black males and White males for the first and only year with school uniforms (1997-98). The mean score for daily absence for the base line year, 1996-97, for male students was 11.94 (SD = 12.06) and 7.55 (SD = 6.57) for female students (see Table 13). The mean absences also decreased for White females during the first year with uniforms in School B, but the absences showed a significant

Table 13

Mean Daily Absence by Race/Ethnicity, Gender, and Year of Attendance for School B (N =129)

Race/Ethnicity	Gender	<u>N</u>	<u>1996-97</u>		<u>*1997-98</u>	
			<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Black	Male	45	12.96	13.63	10.38	12.11
	Female	45	7.07	6.74	7.64	6.38
White	Black	90	10.01	11.09	9.01	9.72
	Male	19	9.53	6.80	8.21	5.14
	Female	20	8.65	6.19	7.04	6.40
	White	39	9.08	6.43	7.61	5.78
Total		129	9.73	9.90	8.59	8.72

*Uniforms worn

increased for Black females. The increase in mean absences for Black females in School B is consistent with attendance patterns after the first year with uniforms in School A. The mean score for days absent was higher for males than for females, and the mean score for days absent was higher for Black students than for White students during the first year with uniforms (see Table 13). The mean score for days absent for 1996-97 for Black students was 10.01 (SD = 11.09) while the mean score for White students was 9.08 (SD = 6.43) for the base line year. The mean score for days absent for male students during the first year of uniforms (1997-98) was 9.7 (SD = 7.46) while the mean score for female students was 7.46 (SD = 6.34).

The mean days absent for Black students during the uniform year was higher than the mean score for White students, and Black males had the highest mean for days absent during both years. This pattern is consistent with the pattern of the general population of the school. There was a decline in the means scores for days absent for all of the groups with the exception of the Black female, during the first year with uniforms in School B. This pattern is consistent with the pattern in School A for its first year with uniforms.

Analysis of Variance was used to determine if there were differences between the variables of race/ethnicity and gender with respect to attendance for students in School B after the implementation of mandatory uniform dress code policies (see Table 14). The ANOVA source table with an alpha level of .05 revealed a significant difference between

Table 14

Summary of Analysis of Variance with Repeated Measures of Attendance from 1996-97 through 1997-98 Based on Race/Ethnicity and Gender for School B (N = 129)

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Race	23.17	1	23.17	.25	.62
Gender	311.19	1	311.19	3.31	.07
Race x Gender	170.83	1	170.83	1.82	.18
Error	21200.90	230			
Within -Groups					
Time	1802.08	1	901.04	9.75	.00*
Time x Gender	138.08	1	69.04	.75	.47
Time x Race	2.19	1	1.09	.98	.02*
Time x Race x					
Gender	389.06	2	194.53	2.11	.12
Total Error	21200.90	230	92.17		

p ≤ .05

race/ethnicity and time after the implementation of school uniforms for one year. Absences showed significant decline within the groups for both Black and White students during the first and only year with uniforms although there were no differences between groups. Tests of hypotheses for differences within groups during the uniform year revealed that there were significant differences in the attendance rates based on the number of days absent ($F = 9.78, df = 2, p = .00^*$). The number of absences decreased significantly for students in School B during the first year of uniforms. Collapsing across race and gender, tests of within group hypotheses revealed statistically significant differences between race and time ($F = .98, df = 2, p = .02^*$) but, no statistically significant differences between gender and time ($F = .75, df = 2, p = .47$) during the first year of uniforms. There was no statistically significant difference between males or females with respect to attendance after one year with uniforms in School B.

Similar to School A, the Hawthorne effect or the novelty of wearing uniforms may have had an impact on the decline in absences of students for the first year with uniforms in School B, and this novelty may wear off during the second year. Although there were no significant changes in the administration, faculty, or student population, other variables may have intervened to help bring about the decline. Another study should be done to determine if there is a trend over a period of two or more years with uniforms in School B.

Grade Point Average (GPA) for School A

The third question determined if there were differences between race/ethnicity and gender with respect to student achievement as measured by grade point average after uniform implementation in School A. Report cards were used to calculate the grade point averages for students in School A during the base line year, 1995-96, and for two consecutive years after uniforms were implemented. Grade point averages were calculated based on the grading scale cited in Chapter Three (Table 6). Descriptive statistics were used to calculate the mean score and the standard deviations for end of the year grades for the students in the sample.

The mean score for grade point averages for Black males (see Table 15) showed an increase for each year with uniforms ($M=1.49$, $M=1.52$, $M=1.60$). The mean score for Black females increased for the first year with uniforms and decreased during the second year ($M=2.08$, $M=2.17$, $M=2.07$). The mean score for White males ($M=2.29$, $M=2.22$, $M=2.22$) declined or remained the same for each year in the study while the mean score for White females ($M=2.30$, $M=2.34$, $M=2.29$) increased for the first year, but declined during the second year with uniforms in School A. The mean grade point average for all students in the sample for 1996-97 was 2.07 ($SD = 1.00$) which was an increase over the mean GPA of 2.04 for the baseline year. However, there was a decline in the overall mean score for grade point average ($M=2.04$, $SD = .87$) for the second year with uniforms.

Repeated Measures Analysis of Variance was used to determine if there were statistically significant relationships between groups (race/ethnicity and gender) with respect to grade point average after wearing uniforms. Using a predetermined alpha level

Table 15

Annual Grade Point Average by Race/Ethnicity, Gender, and Year for School A (N = 120)

<u>Race/Ethnicity</u>	<u>Gender</u>	<u>n</u>	<u>95-96</u>		<u>* 96-97</u>		<u>* 97-98</u>	
			<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Black	Male	30	1.49	.98	1.52	.94	1.60	.76
	Female	30	2.08	.65	2.17	.90	2.07	.64
White	Black	60	1.78	.88	1.84	.97	1.84	.74
	Male	30	2.29	1.06	2.22	1.06	2.22	1.07
	Female	30	2.30	1.06	2.34	.91	2.29	.79
	White	60	2.29	.92	2.28	.98	2.25	.94
Total		120	2.03	.94	2.07	1.00	2.04	.86

* Uniforms worn

of .05, tests of hypotheses for differences between groups revealed that there were statistically significant differences in GPA by gender ($F = 4.9$, $df = 1$, $p = .04^*$) and race/ethnicity ($F = 9.7$, $df = 1$, $p = .02^*$) for students in School A (see Table 16). Female students revealed significantly higher GPA's than male students, and White students revealed significantly higher GPA's than Black students. Collapsing across gender and race/ethnicity, tests of within group hypotheses revealed no significant differences over time ($F = .60$, $df = 1$, $p = .43$) and no significant interactions (see Table 16).

The race/ethnicity and gender differences between the groups in the sample with respect to grade point averages are consistent with grade point averages in the general population of the school. White students generally have higher GPA's when taken collectively, and female students generally have higher GPA's than male students when taken collectively. The increase in the mean GPA scores during the first year of uniforms for Black males as they progress through the upper grades in middle school is not consistent with the general population. The inconsistency in mean GPA's for Black females, White females, and White males is not consistent with the general population of the school, and the increases during the first year with uniforms may possibly be attributed to the Hawthorne effect or the novelty of wearing uniforms. Another study or a follow-up study should be done to determine if the pattern changes after three or four years with uniforms.

Table 16

Summary of Analysis of Variance with Repeated Measures of Grade Point Averages from 1995-96 through 1997-98 Based on Race/Ethnicity and Gender for School A (N = 120)

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	9.52	1	9.52	4.9	.04*
Race/ethnicity	18.83	1	18.83	9.7	.03*
Gender x					
Race/ethnicity	5.50	1	5.50	2.83	.10
Error	225.31	116	1.92		
Within -Groups					
Time	3.08	1	2.08	.01	.91
Time x Gender	9.27	1	9.27	.04	.85
Time x Gender x	.16	2	.16	.61	.44
Race/ethnicity					
Total Error	30.07	116	.26		

p ≤ .05

Grade Point Average (GPA) for School B

The fourth question determined if there were differences between race/ethnicity and gender with respect to student achievement as measured by grade point average after uniform implementation in School B. Report cards were used to calculate the grade point averages for students in School B during the base line year, 1996-97, and for one consecutive year after uniforms were implemented. Grade point averages were calculated based on the grading scale cited in Chapter Three (Table 6). Descriptive statistics were used to calculate the mean scores and the standard deviations for end of the year grades for the 120 students in the sample.

The mean score for grade point averages for Black males for 1996-97, the base line year was 1.96, and there was a decline in the GPA for Black males ($M = 1.66$) for the only year with uniforms (see Table 17). The mean GPA for Black females also decreased from 2.09 to 1.80 during the first and only year with uniforms in School B, so the grade point averages for Black students in the sample dropped from 2.03 to 1.73 for the first year with uniforms in School B. This is a negative impact that cannot be explained, however, the trend is consistent with the general population of Black students in the school who usually experience a decline in GPA's as they progress through the upper grades. This population of students usually experiences more absences than it does during the sixth grade year. The mean GPA's for White males also declined during the first year with uniforms ($M = 3.03$, $M = 2.56$) in School A. Only the GPA's for White female students showed an improvement during the first and only year with uniforms in School B.

Table 17

Annual Grade Point Averages (GPA) by Race/Ethnicity, Gender, and Year for School B (N = 129)

<u>Race/Ethnicity</u>	<u>Gender</u>	<u>n</u>	<u>96-97</u>		<u>* 97-98</u>	
			<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Black	Male	45	1.96	.88	1.66	1.15
	Female	45	2.09	1.18	1.80	1.11
	Black	90	2.03	1.04	1.73	1.12
White	Male	19	2.11	1.10	2.23	.70
	Female	20	3.03	1.10	2.56	1.03
	White	39	2.58	1.07	2.42	.88
Total		129	2.19	1.07	1.94	1.10

* Uniforms worn

Analysis of Variance was used to determine if there were significant differences between race/ethnicity and gender after one year with uniforms. The ANOVA, using a predetermined alpha of .05 revealed a statistically significant difference between gender, race/ethnicity, and time (see Table 18). White students had significantly higher GPA's than Black students and female students had significantly higher GPA's than male students. There was also a statistically significant difference within the groups with respect to time, but this was a negative difference because the grade point averages decreased rather than increased after one year with uniforms.

The higher GPA's for White students and for female students in the sample are consistent with the GPA's for students in the general population of the school. The sample was the same as the population with the exception of one student who was eliminated because he remained in the sixth grade for three consecutive years, and the sample may have contributed to the negative results in School B. All of the students who were enrolled in the school prior to uniform implementation (except the one just mentioned) were included in the sample, and some of these students were still in the school as eighth graders because they had failed the grade during the previous year. These students generally have lower overall GPA's, and they frequently do not improve their GPA's during the second year in the same grade. The sample selection may have been a contributing factor to the apparently negative impact of wearing uniforms on student achievement for all groups, except White females, in School B.

Table 18

Summary of Analysis of Variance for Grade Point Averages from 1996-97 through 1997-98 Based on Race/Ethnicity and Gender for School B (N =129).

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	7.45	1	7.45	4.36	.04*
Race/ethnicity	20.40	1	20.40	11.95	.01*
Gender x					
Race/ethnicity	2.95	1	2.95	1.72	.19
Error	213.50	125	1.71		
Within -Groups					
Time	2.68	1	2.68	5.82	.02*
Time x Gender	1.35	1	1.35	2.94	.09
Time x					
Race/ethnicity	.32	1	.32	.69	.41
Time x Gender x					
Race/ethnicity	1.38	2	1.38	2.99	.09
Total Error	57.61	125	.42		

$p \leq .05$

Classroom Environment

There were four major questions to determine the impact of mandatory uniform dress code implementation on teachers' perceptions of classroom environment as measured by four domains: student attendance, student behavior, student achievement, and student self-image. The four questions were as follows;

(1) What is the relationship among race/ethnicity, gender, and years of teaching experience with respect to teachers' perceptions of students' attendance after uniform implementation in Schools A and B?

(2) What is the relationship among race/ethnicity, gender, and years of teaching experience with respect to teachers' perceptions of students' behavior after uniform implementation in Schools A and B?

(3) What is the relationship among race/ethnicity, gender, and years of teaching experience with respect to teachers' perceptions of students' achievement after uniform implementation in Schools A and B?

(4) What is the relationship among race/ethnicity, gender, and years of teaching experience with respect to teachers' perceptions of students' self-image after uniform implementation in Schools A and B?

In order to answer the four questions regarding teachers' perceptions of the impact of mandatory uniform dress codes, a School Uniform Survey was developed and administered to teachers of both schools during a regular faculty meeting. The survey was developed using a four-point Likert-type scale with item selections ranging from number

one to number four. The survey was validated for content by a body of experts in the education field, and items borrowed from a previous researcher were tested for reliability by that researcher (Hughes, 1996). On the rating scale used in the survey, number one represented “strongly disagree,” two represented “disagree,” three represented “agree,” and four represented “strongly agree.” Items were stated in both the positive and negative directions, and the possible responses were coded so that the higher the number of the response, the more positive the survey participants felt about students wearing uniforms.

The twenty-eight items on the survey were divided into four domains: attendance, behavior, achievement, and students’ self- image. (see Table 8). Descriptive statistics were used to calculate the means and standard deviations for each school. Any item on the survey that received a rating of 2.5 or better on the scale of 1 to 4 (strongly disagree to strongly agree) was considered as a positive perception of the uniform policy. The rating scale of 2.5 as a positive rating was based on previous survey research (Hughes, 1996, Hoffler-Riddick, 1998). Three-way Analyses of Variance was used to determine if there were significant relationships among the variables of race/ethnicity, gender, and years of teaching experience with respect to teachers’ perceptions of classroom environment.

Convenience sampling was used to administer the survey only to those teachers who were present on the day the survey was administered (see Table 5). Analyses of Variance was used to determine if there were significant relationships between teachers’ perceptions of uniforms and their race/ethnicity (Black, White), gender (male, female), or

years of teaching experience. In order to assist with calculations, years of teaching experience were divided into three scales: 1 represented 0 to 8 years; 2 represented 8.01 to 15.66 years and 3 represented 15.67 to 34 years. This procedure has also been used in previous research.

Perceptions of Student Attendance

The first question regarding classroom environment examined teachers' perceptions of student attendance after a change to uniform styles of dress in Schools A and B. The grand mean for the teachers' perceptions of a change in student attendance after uniforms was 2.09 for School A (SD = .38). There was no significant difference between the mean scores for Black teachers (M = 2.09, SD = .38) and the mean scores for White teachers (M = 2.09, SD = .39) in School A with respect to their perceptions of a change in student attendance after uniforms. There was also no statistically significant difference between the mean scores for the perceptions of Black teachers (M = 2.25, SD = .46) and the mean scores for the perceptions of White teachers (M = 2.50, SD = .31) in School B with respect to student attendance after a change to uniform styles of dress (see Table 19).

There was no statistically significant difference between the mean scores for teachers' perceptions of a change in student attendance based on gender in Schools A or B (see Table 20). The mean score for male teachers in School A was 1.9 (M = 1.91, SD = .42) and for female teachers was 2.14 (M = 2.14, SD = .35). The mean score for male

Table 19

Mean Scores and Standard Deviations for Teachers' Perceptions by Race/Ethnicity of Student Attendance After Uniform Implementation in School A and School B

<u>School</u>	<u>Race/ethnicity</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Black	23	2.09	.38
	White	38	2.09	.39
	Total	61	2.09	.38
B	Black	43	2.26	.47
	White	24	2.50	.31
	Total	67	2.34	.43

Table 20

Mean Scores and Standard Deviations for Teachers' Perceptions by Gender of Student Attendance After Uniform Implementation in School A and School B

<u>School</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Male	14	2.25	.46
A	Female	47	2.14	.35
Total		61	2.09	.38
B	Male	11	2.36	.36
B	Female	56	2.34	.44
Total		67	2.34	.43

teachers in School B was 2.3 ($M = 2.36$, $SD = .36$) while the mean score for female teachers in School B was 2.34 ($M = 2.34$, $SD = .44$).

There was no statistically significant difference among the variable years of teaching experience with respect to teachers' perceptions of a change in student attendance after uniform implementation in Schools A or B. Years of teaching experience were divided into three scales (0-8, 8.01-15.66, and 15.67-34 years). The mean score for teachers with 0-8 years of teaching experience was 2.1 ($M = 2.1$, $SD = .46$) for School A and ($M = 2.4$, $SD = .33$) for School B. The mean score for teachers with 8.01-15.66 years of teaching experience was 2.1 ($M = 2.16$, $SD = .29$) for School A and 2.25 ($M = 2.25$, $SD = .43$) for School B. The mean score for teachers with 15.67-34 years of teaching experience was 2.03 ($M = 2.03$, $SD = .35$) for School A and 2.36 ($M = 2.36$, $SD = .49$) for School B (see Table 21).

The Three-Way Analysis of Variance revealed no statistically significant interactions among the variables of race/ethnicity, gender, and years of teaching experience with respect to teachers' perceptions of a change in student attendance after the change to uniform styles of dress in School A (see Table 22) or the change to uniform styles of dress in School B (see Table 23).

Table 21

Mean Scores and Standard Deviations for Teachers' Perceptions by Years of TeachingExperience of Student Attendance After Uniform Implementation in School A and SchoolB

<u>School A</u>	<u>Years of Exp.</u>	<u>N</u>	<u>M</u>	<u>SD</u>
	0-8	24	2.10	.46
	8.01-15.66	17	2.16	.29
	15.67-34	20	2.03	.35
Total		61	2.09	.38
School B	Years of Exp.			
	0-8	20	2.41	.33
	8.01-15.66	20	2.25	.43
	15.67-34	27	2.36	.49
Total		67	2.34	.43

Table 22

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Student Attendance after Uniform Implementation in School A (N = 61)

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.12	1	.12	.78	.38
Race	.38	1	.38	.25	.62
Exp.	.19	1	.95	.62	.54
Within - Groups					
Gender x					
Race/ethnicity	.26	1	.26	1.46	.23
Gender x Exp	.28	1	.14	.92	.41
Gender x Race					
x Exp	.78	2	.39	.25	.78
Total	8.85	60	.15		

$p \leq .05$

Table 23

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity Years of Teaching Experience and Teachers' Perceptions of Student Attendance after Uniform Implementation in School B (N = 67)

Source	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between -Groups					
Gender	1	.11	.11	.99	.32
Race	1	.67	.67	.06	.81
Exp.	2	.45	.23	1.98	.15
Within -Groups					
Gender x Race	1	.26	.26	.53	.60
Gender x Exp.	1	.12	.60	.02	.98
Gender x Race x Exp.	2	.11	.54	.05	.54
Total	66	12.46	.19		

$p \leq .05$

Perceptions of Student Behavior

The second question regarding classroom environment examined the teachers' perceptions of the impact of school uniforms on student behavior. The mean score for teachers' perceptions of a change in student behavior after a change to uniforms was 2.40 for School A. The score of 2.4 indicated that teachers in School A believed that uniforms had no significant impact on student behavior since a score of 2.5 was needed to indicate a positive rating. The mean score for teachers' perceptions of a change in student behavior after uniform implementation in School B was 2.53. This score indicated that teachers had positive perceptions of student behavior after uniform implementation in School B.

There was no statistically significant difference between the mean scores of teachers' perceptions of a change in student behavior after uniforms with respect to teachers' race/ethnicity. The mean score for Black teachers in School A was 2.4 ($M = 2.41$, $SD = .26$), while the mean score for White teachers in School A was also 2.4 ($M = 2.40$, $SD = .36$). The mean score was 2.4 ($M = 2.47$, $SD = .43$) for Black teachers and 2.66 ($M = 2.66$, $SD = .25$) for White teachers in School B (see Table 24).

There was no significant difference between the mean scores for teachers' perceptions of a change in student behavior after uniform implementation in Schools A or B with respect to gender (see Table 25). The mean score for male teachers was 2.32 ($M = 2.32$, $SD = .31$) while the mean score for female teachers was 2.43 ($M = 2.43$, $SD = .33$) for School A. The mean score for male teachers was 2.55 ($M = 2.55$, $SD = .47$) while the mean score for female teachers was 2.53 ($M = 2.534$, $SD = .38$) for School B.

Table 24

Mean Scores and Standard Deviations for Teachers' Perceptions by Race/Ethnicity of Student Behavior After Uniform Implementation in School A and School B

<u>School</u>	<u>Race/ethnicity</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Black	23	2.42	.26
	White	38	2.41	.36
	Total	61	2.41	.32
B	Black	43	2.47	.43
	White	24	2.66	.25
	Total	67	2.53	.39

Table 25

Mean Scores and Standard Deviations for Teachers' Perceptions by Gender of Student Behavior After Uniform Implementation in School A and School B

<u>School</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Male	14	2.32	.30
	Female	47	2.43	.33
	Total	61	2.41	.32
B	Male	11	2.55	.47
	Female	56	2.53	.37
	Total	67	2.53	.39

The mean score for teacher's perceptions of student behavior with respect to years of teaching experience was 2.30 ($M = 2.30$, $SD = .34$) for 0-8 years, 2.4 ($M = 2.48$, $SD = .32$) for 8.01-15.66 years, and 2.47, $SD = .26$) for 15.67-34 years of teaching experience for School A. The mean score for teachers based on years of teaching experience was 2.5 ($M = 2.5$, $SD = .30$) for 0-8 years, 2.52 ($M = 2.52$, $SD = .44$) for 8.01-15.66 years, and 2.56 ($M = 2.56$, $SD = .42$) for years of teaching experience for School B. There was no significant difference between the groups based on teaching experience with respect to a change in student behavior in either School A or School B (see Table 26). The mean score of 2.53 for teachers in School B based on years of teaching experience revealed that teachers with greater teaching experience believed that school uniforms had a positive impact on student behavior in that school. The mean score of 2.4 based on years of teaching experience was below the favorable rating of 2.5 for teachers in School A which means that teachers in School A believed that uniforms had no impact on student behavior.

The higher rating of teachers in School B, which was in its first year with uniforms, may have been part of a Hawthorne effect for teachers' perceptions of a change as well as for students who wore the uniform. The novelty of students wearing school uniforms may have had a positive impact on teachers' perceptions during the first year of implementation in School B. The novelty may have begun to wear off in School A which was in its second year of implementation during the year that the survey was given. Analysis of Variance revealed no statistically significant differences among race/ethnicity, gender, or years of teaching experience with respect to a change in student behavior after the implementation of uniforms (see Table 27).

Table 26

Mean Scores and Standard Deviations for Teachers' Perceptions by Years of Teaching Experience of Student Behavior After Uniform Implementation in School A and School B

<u>School A</u>	<u>Years of Exp.</u>	<u>N</u>	<u>M</u>	<u>SD</u>
	0-8	24	2.30	.34
	8.01-15.66	17	2.49	.32
	15.67-34	20	2.47	.28
Total		61	2.41	.32
<u>School B</u>	<u>Years of Exp.</u>			
	0-8	20	2.51	.30
	8.01-15.66	20	2.52	.44
	15.67-34	27	2.56	.42
Total		67	2.53	.39

Table 27

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Student Behavior after Uniform Implementation in School A

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.12	1	.12	.77	.38
Race	.38	1	.38	.25	.62
Exp.	.19	2	.95	.62	.54
Within - Groups					
Gender x Race	.23	1	.23	1.46	.23
Gender x Exp	.28	2	.14	.92	.42
Gender x Race x Exp	.78	2	.39	.25	.78
Total	8.85	60	.15		

$p = \leq .05$

Perceptions of Student Achievement

The third question on classroom environment examined teachers' perception of the impact of school uniforms on student achievement in Schools A and B after a change to uniforms. The grand mean for teachers' perceptions of the impact of uniforms on student achievement for both schools combined was 2.58 ($M = 2.58$, $SD = .42$). The mean score of 2.58 revealed that teachers perceived school uniforms as having a positive impact on student achievement. There was no statistically significant difference between the mean scores of perceptions of a change in student achievement with respect to teachers' race/ethnicity, however. The mean score for Black teachers in School A was 2.5 ($M = 2.50$, $SD = .46$) while the mean score for White teachers was 2.53 ($M = 2.53$, $SD = .38$) in School A. The mean score was 2.6 ($M = 2.58$, $SD = .45$) for Black teachers and 2.7 ($M = 2.72$, $SD = .33$) for White teachers in School B (see Table 28).

The total mean score of 2.52 means that teachers of both races felt that uniforms had a positive impact on student achievement in School A. The total mean of 2.63 revealed a positive perception of teachers by race/ethnicity in School B with respect to the impact of mandatory school uniforms on student achievement. There was no statistically significant difference by gender between the mean scores for teachers' perceptions of a change in student achievement after uniform implementation in Schools A and B (see Table 29). The mean score for male teachers was 2.5 ($M = 2.51$, $SD = .43$) while the mean score for female teachers was 2.5 ($M = 2.53$, $SD = .40$) in School A. The mean score for male teachers was 2.8 ($M = 2.78$, $SD = .48$) while the mean score for female teachers was 2.6 ($M = 2.60$, $SD = .40$) in School B (see Table 29). A total mean of 2.5 in School A and a

Table 28

Mean Scores and Standard Deviations for Teachers' Perceptions by Race/Ethnicity of Student Achievement after Uniform Implementation in School A and School B

<u>School</u>	<u>Race/ethnicity</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Black	23	2.50	.46
	White	38	2.53	.38
	Total	61	2.52	.41
B	Black	43	2.58	.46
	White	24	2.72	.33
	Total	67	2.63	.42

Table 29

Mean Scores and Standard Deviations for Teachers' Perceptions by Gender of Student Achievement After Uniform Implementation in School A and School B

<u>School</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Male	14	2.51	.43
	Female	47	2.52	.40
	Total	61	2.52	.41
B	Male	11	2.78	.48
	Female	56	2.60	.40
	Total	67	2.63	.42

2.6 in School B revealed a positive perception of teachers by gender in both schools with respect to the impact of uniforms on student achievement.

The mean score for teachers' perceptions of a change in student achievement with respect to years of teaching experience was 2.5 ($M = 2.47$, $SD = .36$) for 0-8 years, 2.6 ($M = 2.62$, $SD = .33$) for 8.01-15.66 years, and 2.5 ($M = 2.51$, $SD = .51$) for 15.67-34 years, revealing no significant difference for teachers in School A (see Table 30). The mean score for teachers' perceptions of school uniforms based on years of experience revealed no significant differences in School B. The mean score based on years of experience was 2.6 ($M = 2.56$, $SD = .39$) for 0-8 years, 2.5 ($M = 2.55$, $SD = .37$) for 8.01-15.66 years, and 2.7 ($M = 2.74$, $SD = .46$) for 15.67-34 years of teaching experience, yielding no significant difference with respect to perceptions of student achievement in School B. The total mean score of 2.63 revealed a positive perception of the impact of uniforms on student achievement for School B.

Three-way Analysis of Variance using a predetermined alpha level of .05 revealed no statistically significant difference among race/ethnicity, gender, or years of teaching experience with respect to teachers' perceptions of a change in student achievement after uniform implementation in School A (see Table 31). The three-way ANOVA also yielded no statistically significant relationships among the variables of race/ethnicity, gender, years of teaching experience and teachers' perceptions of a change in student achievement after uniform implementation in School B during its first year with uniforms (see Table 32).

Table 30

Mean Scores and Standard Deviations for Teachers' Perceptions by Years of TeachingExperience of Student Achievement After Uniform Implementation in School A and SchoolB

<u>School A</u>	<u>Years of Exp.</u>	<u>N</u>	<u>M</u>	<u>SD</u>
	0-8	24	2.46	.36
	8.01-15.66	17	2.62	.33
	15.67-34	20	2.51	.51
Total		61	2.52	.41
School B	Years of Exp.			
	0-8	20	2.56	.41
	8.01-15.66	20	2.55	.37
	15.67-34	27	2.75	.46
Total		67	2.63	.42

Table 31

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Student Achievement after Uniform Implementation in School A (N = 61)

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.74	1	.74	.04	.84
Race	.68	1	.68	.37	.54
Exp.	.26	2	.13	.73	.49
Within - Groups					
Gender x Race	.66	1	.66	.36	.55
Gender x Exp	.14	2	.67	.37	.69
Gender x Race x Exp	.19	2	.96	.53	.59
Total	10.17	60	.17		

p = ≤.05

Table 32

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Student Achievement after Uniform Implementation in School B (N = 67)

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.12	1	.12	.78	.38
Race	.38	1	.38	.25	.62
Exp	.19	2	.95	.62	.54
Within - Groups					
Gender x Race	.23	1	.23	1.46	.23
Gender x Exp	.28	2	.14	.92	.40
Gender x Race x Exp	.78	2	.39	.25	.78
Total	8.85	60	.14		

$p = \leq .05$

Teachers' Perceptions of Student Self-image

The final question on classroom environment examined teachers' perceptions by race/ethnicity, gender, and years of teaching experience of students' self-image in Schools A and B after a change to uniforms. There was no statistically significant difference between the mean scores of perceptions of a change in student self-image with respect to teachers' race/ethnicity/ethnicity. The mean score for Black teachers in School A was 2.8 (M = 2.77, SD = .35) while the mean score for White teachers was 2.7 (M = 2.73, SD = .30) in School A. The mean score was 2.6 (M = 2.61, SD = .43) for Black teachers and 2.7 (M = 2.70, SD = .21) for White teachers in School B (see Table 33). The total mean of 2.69 revealed a positive perception of teachers by race/ethnicity in both schools with respect to uniforms.

There was no statistically significant difference between the mean scores for teachers' perceptions of a change in students' self-image after uniform implementation in Schools A and B with respect to gender (see Table 34). The mean score for male teachers was 2.7 (M = 2.71, SD = .32) while the mean score for female teachers was 2.8 (M = 2.76, SD = .32) in School A. The mean score for male teachers was 2.7 (M = 2.65, SD = .34) while the mean score for female teachers was 2.6 (M = 2.64, SD = .38) in School B (see Table 35). A total mean of 2.7 revealed a positive perception of teachers by gender in both schools with respect to the impact of uniforms on students' self-image. Female teachers scored slightly higher than male teachers in their perceptions of a change in students' self-image in both schools.

Table 33

Mean Scores and Standard Deviations for Teachers' Perceptions by Race/Ethnicity of Students' Self-image after Uniform Implementation in School A and School B

<u>School</u>	<u>Race/Ethnicity</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Black	23	2.77	.35
	White	38	2.73	.30
	Total	61	2.74	.31
B	Black	43	2.61	.43
	White	24	2.71	.21
	Total	67	2.64	.37

Table 34

Mean Scores and Standard Deviations for Teachers' Perceptions by Gender of Students'Self-image After Uniform Implementation in School A and School B

<u>School</u>	<u>Gender</u>	<u>N</u>	<u>M</u>	<u>SD</u>
A	Male	14	2.70	.32
	Female	47	2.75	.32
	Total	61	2.74	.31
B	Male	11	2.64	.34
	Female	56	2.64	.38
	Total	67	2.64	.37

Table 35

Mean Scores and Standard Deviations for Teachers' Perceptions by Years of Teaching Experience of Students' Self-image After Uniform Implementation in School A and School B

<u>School A</u>	<u>Years of Exp.</u>	<u>N</u>	<u>M</u>	<u>SD</u>
	0-8	24	2.69	.30
	8.01-15.66	17	2.78	.32
	15.67-34	20	2.79	.32
Total		61	2.74	.31
School B	Years of Exp.			
	0-8	20	2.64	.29
	8.01-15.66	20	2.59	.34
	15.67-34	27	2.69	.44
Total		67	2.64	.37

The mean score for teachers' perceptions of a change in students' self-image with respect to years of teaching experience was 2.7 ($M = 2.68$, $SD = .30$) for 0-8 years, 2.8 ($M = 2.78$, $SD = .32$) for 8.01-15.66 years, and 2.8 ($M = 2.79$, $SD = .32$) for 15.67-34 years, revealing no significant difference for teachers in School A (see Table 36). The mean score for teachers' perceptions of school uniforms based on years of experience revealed no significant differences in School B. The mean score based on years of experience was 2.6 ($M = 2.64$, $SD = .29$) for 0-8 years, 2.6 ($M = 2.59$, $SD = .34$) for 8.01-15.66 years, and 2.7 ($M = 2.69$, $SD = .44$) for 15.67-34 years of teaching experience. Teachers with more years of experience scored slightly higher than teachers with 0-8 years or those with 8.01 to 15.66, but there were no significant differences between the groups with respect to perceptions of students' self-image in School B. The grand mean for teachers' perceptions of the impact of uniforms on students' self-image for both schools combined was 2.70 ($M = 2.70$, $SD = .35$). The mean score of 2.70 revealed that teachers in both schools perceived school uniforms as having a positive impact on students' self-image.

Although descriptive statistics revealed positive perceptions by teachers of changes in student achievement and self-image, three-way Analysis of Variance revealed no statistically significant difference in the teachers' perceptions by race/ethnicity, gender, or years of teaching experience in either school. Using a predetermined alpha level of .05, the three-way ANOVA revealed no differences among the variables in School A (see Table 36) or School B (see Table 37) after a change to mandatory school uniforms.

Table 36

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Student Achievement after Uniform Implementation in School A (N = 61)

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.54	1	.54	.50	.42
Race	.46	1	.46	.04	.84
Exp.	.36	2	.18	1.66	.20
Within - Groups					
Gender x Race	.66	1	.66	.36	.55
Gender x Exp	.14	1	.67	.37	.69
Gender x					
Race x Exp	.19	2	.96	.53	.59
Total	10.17	60	.17		

$p = \leq .05$

Table 37

Three-way ANOVA for the Relationships Between Gender, Race/Ethnicity, Years of Teaching Experience and Teachers' Perceptions of Students' Self-image after Uniform Implementation in School B (N = 67)

Source	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between - Groups					
Gender	.12	1	.12	.76	.38
Race	.38	1	.38	.25	.62
Exp.	.19	2	.95	.62	.54
Within - Groups					
Gender x Race	.23	1	.23	1.46	.23
Gender x Exp	.28	1	.14	.92	.41
Gender x Race x Exp	.78	2	.39	.25	.78
Total	8.85	60	.15		

$p \leq .05$

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to determine if the implementation of mandatory uniform dress code policies had a significant impact on student attendance, student achievement, or teachers' perceptions of classroom environment in two middle schools. The findings revealed inconsistent changes in attendance patterns and achievement. Teachers generally supported the uniform policy, but they felt the uniforms had a positive impact on only two (students' achievement and students' self-image) of the four domains tested.

Student Attendance

The findings indicated by the statistical analyses revealed that student attendance, based on the number of days absent, improved for the first year of uniform implementation in School A; then, it declined significantly during the second year of uniforms. The novelty of wearing the uniforms may have accounted for the improvement during the first year, but other factors may have also contributed. Since there were no other major changes in school policies, administration, or staff during the two years of the study, a change in attendance patterns would have been attributed to the change to uniforms if it had remained consistent for both years. The increase in the number of absences in the sample during the eighth grade year was consistent with attendance patterns for the general population of the school as students get older. Older students and those in the eighth grade generally have a higher number of absences than the students in the lower grades of middle school as revealed in

the Outcome Accountability Project (Virginia Department of Education, 1997). However, the significant increase in the number of days absent for students in School A during the second year with uniforms cannot be totally explained as a result of this study.

There was a significant decline in the number of absences for students in School B during the first and only year with uniforms. Student attendance in School B increased significantly overall as well as for Black males, White males, and White females during the first and only year with uniforms in School B. Unlike the other groups, however, Black females showed a decline in attendance patterns for the first year with uniforms. Although Black females were absent more frequently during both years with uniforms, student absences declined overall during the first year with uniforms in School A. The decline in the number of absences may have resulted from the novelty of wearing uniforms, since there was also a decline in the number of absences for students in School A during its first year with uniforms. A future avenue of study could be the replication of this study or a longitudinal study of both schools to determine if there would be positive changes in attendance patterns and if the changes would be sustained over a number of years for students in both schools.

Student Achievement

Student achievement as measured by grade point average showed a slight increase for students in School A after the first year of uniforms, but similar to the attendance scores, grade point averages showed a decline during the second year of uniform implementation. Black males in the sample, unlike the other groups, showed an increase in

grade point averages for each of the uniform years. This positive change cannot be fully explained, but it may have been impacted by the novelty of the uniforms since there were no special programs for Black males introduced in School A during the uniform years. Grade point averages for White students were significantly higher than the grade point averages for Black students. Grade point averages for female students were also higher than the grade point averages for male students for the first year of uniforms, but there was a slight decline in GPA's for females during the second year of uniforms in School A.

The only significant difference that occurred with respect to the impact of school uniforms on student achievement was the difference between groups in the School B. There were statistically significant differences between race/ethnicity and gender with respect to grade point averages for students in School B. White students had significantly higher GPA's than Black students, and female students had significantly higher GPA's than male students after the first and only year with uniforms. These differences were also consistent with differences by race/ethnicity and gender in the general school population. White students generally have higher GPA's than Black students, and female students generally have higher GPA's than male students when taken collectively (Virginia Department of Education, 1997). Perhaps future studies should use standardized tests rather than GPA's to help eliminate a change in teachers as one of the variables that may have impacted the results of this study. The lack of any standardized test scores to use as measurements of student achievement was a limitation to this study.

Teachers' Perceptions of Classroom Environment

Based on the results of the Uniform Survey, teachers in both schools had generally positive perceptions of school uniforms, but their perceptions differed by domain. Teachers basically felt that school uniforms had no significantly positive impact on the domains of student attendance or behavior. Teachers in both schools, however, felt that school uniforms had a positive impact on student achievement and students' self-image.

Threats to Internal and External Validity

According to Campbell and Stanley (1963; Gall, Borg, & Gall, 1996), there are twelve threats to internal and external validity. History and maturation could have been threats to the internal validity in this study. One of the middle schools (School A) in this study had been under the leadership of three different principals for each of the three years prior to uniform dress code implementation; however, both assistant principals remained in their positions for three years prior to uniform implementation. The principal and one of the assistant principals of School B had changed two years prior to uniform implementation. The teaching staffs and the administrative staffs of both schools had remained relatively stable for three years prior to uniform implementation, so history may not have been a threat to the internal validity of the study.

Maturation may have been a threat to the internal validity of the study. During the one to two-year periods in which the experimental treatments (school uniforms) have been in place, physical and psychological changes may have occurred in the research participants (Campbell & Stanley, 1963; Gall, Borg, & Gall, 1996).

One other possible threat to the external validity of the study could have been the “Hawthorne effect.” The “Hawthorne effect” refers to any situation in which the conditions are such that the research participants are aware of their treatment and, consequently, may perform or behave better because they believe they are expected to perform better as a result of the treatment, such as school uniforms (Campbell & Stanley, 1963; Gall, Borg, & Gall, 1996).

Limitations of the Study

One limitation of this study with respect to the impact of the uniforms on attendance, achievement, and perceptions of a classroom environment is the length of time after the treatment with uniforms. The inconsistency in attendance patterns for students in School A is an indication that either uniforms had a negative impact on attendance during the second year or that other variables intervened which resulted in the negative results for the second year. Variables such as age, maturity, and teenage pregnancies may have impacted the increase in absences during the eighth grade year, and these variables, which were not controlled for this study, may have been limitations to the findings.

A limitation to the study with respect to School B, which had experienced only one year with uniforms at the time of this study, was definitely the time. Although School B showed a slight increase in student attendance and achievement, one year was insufficient time to attribute the changes to uniform implementation. The inconsistencies that occurred in School B with respect to improvements in student attendance and achievement are an indication that one year of experimentation may not have been sufficient time to conclude

that the uniforms had a positive impact on the results. Again, the novelty of wearing the uniforms may have been at least one of the variables that affected the changes, but there may have been others. Another study should be done on School B to determine if similar results will occur after a second year with uniforms.

A final limitation to the study was the collection of data for the survey based on memory. Teachers were asked to think back three years for School A and two years for School B before completing the survey on which they had to respond to their perceptions of student attendance, behavior, achievement, and self-image before and after uniform implementation. Whenever one relies on memory for the completion of a questionnaire, there is a limitation to the accuracy of that memory and to the validity of the results.

Implications for Future Research

The inconsistencies in the results of this study reveal that there are other areas with respect to the impact of school uniforms on student attendance and achievement that should be explored. Both schools in this study had similar demographics with the exception that School A is a magnet school with approximately one-third of its population drawn from other schools within the district. This fact probably accounted for the higher grade point averages and better attendance rates. This is also a rationale for reporting the results of each school individually as well as comparing the results of the two schools collectively with respect to student attendance and grade point average. Another study or a longitudinal study should be done on schools A and B, but future research should also be done on schools

in other communities, on elementary schools, and in other school districts to determine if the results are similar after uniform implementation.

Because the results were so inconsistent, a longitudinal study should be done with both schools to determine if uniforms possibly have a lasting effect on attendance, achievement, or classroom environment. The results of the surveys indicated that teachers overwhelmingly supported uniforms in both schools; however, the teachers were also inconsistent in their beliefs about the real impact of uniforms on student attendance and student behavior. Because teachers overwhelmingly perceived uniforms as having a positive impact on student achievement and students' self image in both schools, there are strong implications for implementing or keeping uniform policies. Perceptions are important, and research has shown that students' self-image impacts attendance, behavior, and achievement (Piaget, 1974). The long-term effects on perceptions of student behavior, achievement, and feelings of self-image as they relate to classroom environment should be considered in future studies. Future studies should also consider the perceptions of students, parents, and members of the community with respect to the impact of mandatory school uniforms.

Summary

Faced with high rates of absenteeism and poor academic achievement, school leaders across the country are still seeking ways to bring about positive changes in the attendance patterns, achievement, and general behavior of middle school students. Although the findings in this study indicated some positive changes in the two middle

schools, more research is needed to determine if uniforms actually have a significant impact on student outcomes, especially academic achievement. The implementation of mandatory uniform dress code policies may be just one of the variables that contribute to the improvement of student attendance and achievement, as well as to the positive perceptions of teachers with respect to classroom environment.

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