

## ABSTRACT

Wesley Scott Johnson. ANALYSES OF THE IMPACT OF SCHOOL UNIFORMS ON VIOLENCE IN NORTH CAROLINA PUBLIC HIGH SCHOOLS. (Under the direction of Dr. William Rouse, Jr.) Department of Educational Leadership, June, 2010.

This study incorporated a multiple-methods design utilizing both quantitative and qualitative data. The quantitative portion investigated several annual reports distributed by the North Carolina Department of Public Instruction (NCDPI) to explore the impact of school uniform policies on incidents of crime and violence and occurrences of suspensions and expulsions in North Carolina high schools that adopted such policies during the 2004-2005, 2005-2006, 2006-2007, 2007-2008, and 2008-2009 school years. The qualitative portion of this study examined an eight-item researcher-developed Likert-type survey distributed to all current North Carolina administrators working in the high schools where school uniform policies were adopted during the designated time period in an attempt to gauge their perceptions of how the adopted policy had changed the safety of their schools and their campuses.

The data analysis indicated no change to the incidents of crime and violence and occurrences of suspensions for the majority of the thirty-eight high schools being examined in this study, although the school administrators working in these schools perceived school uniforms to positively impact school safety. The data for expulsions had to be omitted due to limited numbers.

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ON VIOLENCE IN NORTH CAROLINA PUBLIC HIGH SCHOOLS

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## CHAPTER 1: INTRODUCTION

The issue of increased violence in public schools has been well documented over the last ten years (Hill & Drolet, 1999; Massare, 2003; Shelton, Owens, & Song, 2009; Vairo, Marcus, & Weiner, 2007). Massare noted, “the proliferation of violence in the public schools in the past decade has created a sense of emergency regarding safety in school districts” (p. 15). Shelton et al. (2009) acknowledged, “school security has become a major issue around the country due to the increased levels of violence” (p. 28). Vairo et al. (2007) stated, “[school] violence ... [is] so prevalent that it ... extends from the elementary grades into our universities ... [and across] all geographical parts of our country—in rural and suburban areas as well as our metropolitan centers” (p. 159-160).

As the incidents of school violence and deadly attacks have escalated in the United States, educators and policymakers have focused their attention on the issues of school violence and safety (Shelton et al., 2009). Hill and Drolet (1999) stated, “in the past, schools were viewed as a safe and nurturing environment for children” (p. 264). As late as the early 1970s, incidents of violent attacks and crimes on school campuses were not routinely collected. A 1974 report from the National Association of School Security Directors highlighting the approximate 204,000 assaults occurring annually on school campuses across the country began to change the perception of children’s safety while attending school (Hill & Drolet).

As serious as assaults were in 1974, the incidents of more recent school crimes and violence are unprecedented (Hill & Drolet, 1999). Comparing the school violence of the early 1970s to the school violence being faced in the late 1990s, Hill and Drolet

quoting Deborah Prothrow-Stith wrote, “violence in schools is certainly not new, almost every adult remembers the school bully, but today’s school violence is increasingly lethal” (p. 264). Hill and Drolet quoting Curcio stated, “they [the students] bring their weapons, drugs, grudges, problems, anger, and potential for danger to school with them when they come” (p. 264), which created the opportunity for violent outburst at school.

With nearly 17,000 students per month suffering injuries from school violent attacks, this issue has become one of the most serious problems vexing United States public schools (Vairo et al., 2007). Vairo et al. concluded, “if violence in our schools is not halted, we shall witness a collapse of the American educational system” (p. 164). As policy makers, educators, and parents have begun to face these issues and these statistics, the safety of children attending school has become a major concern (Marsh & Evans, 2007).

The history of shootings and violent assaults in schools across this country has left educators, policymakers, parents, and students demanding and searching for answers to this growing epidemic (Grant Fedra, 2008; Massare, 2003; Shelton et al., 2009). Massare noted, “the recent history of violent acts in schools and communities seems to have strengthened the resolve of local boards of education, administrators, teachers, and parents to implement programs and initiatives to maintain safe and disciplined schools” (p. 34). The following strategies have been investigated and implemented in United States school systems in the effort to make them safer: anti-bullying campaigns, zero-tolerance policies, security cameras, walkie-talkies, random sweeps of lockers, ID badges, classroom phones, sign-in/sign-out procedures, expanded access to counseling, increased security personnel, fencing around schools,

expanded exterior lighting, and even the use of metal-detectors (<http://www.nea.org/schoolsafety/index.html>; Grant Feda; Shelton et al.). As educators and policy makers have continued to search for answers to increase safety while decreasing violence in schools, the mandatory use of school uniforms has become an increasingly popular strategy (MacDonald, 2000; Starr, 2000; Vairo et al., 2007; Wilson, 1999). Anderson (2002) stated, “a sincere concern with safety has been the overriding impetus toward the implementation of ... [school] uniform policies” (p. 5), and this can be seen further in the following quotation taken from the United States Department of Education’s *Manual on School Uniforms* (1996):

In response to growing levels of violence in our schools, many parents, teachers, and school officials have come to see school uniforms as one positive and creative way to reduce discipline problems and increase school safety. The potential benefits of school uniforms include: decreasing violence and theft ... helping prevent gang members from wearing gang colors and insignia at school; [and] instilling students with discipline (p. 1).

White (2000) stated, “uniforms are portrayed as a way to curb teen violence” (p. 38), and Blount (1996) noted, “in schools throughout the United States ... the escalation of violent incidents among school youths over clothing and accessories has made the idea of mandating uniforms in public schools more appealing to many parents, teachers, school officials, and students” (p. 41). Not everyone agrees school uniforms have the potential to reduce incidents of crime and violence and thereby increase school safety (Massare, 2003; Samuels, 2003; Washington-Labat, 2003). While some researchers

and school officials see uniforms as necessary and helpful (Herman, 1998) others see them as too simplistic and unnecessary (Brunsma, 2004; Caruso, 1996).

The first public school to mandate the use of school uniforms was Cherry Hill Elementary in Baltimore, Maryland in 1987. Their use spread rapidly, and by the beginning of the 1998-99 school year, over 11.5% of all public elementary schools had mandatory school uniform policies. At the start of the 2001-2002 school year, the National Center for Educational Statistics (NCES) estimated nearly 23% of all public elementary schools had school uniform policies, and in 2004, the NCES noted nearly 25% of all public schools in the United States had adopted school uniform policies (Brunsma, 2006).

As the numbers of schools and school systems implementing uniforms across this country have continued to increase and with these policies being mandated “to tone down the outbreak of theft and violence” (Blount, 1996), many stakeholders have begun to question whether the intended results to school safety are actually being achieved (Washington-Labat, 2003). Analyzing the relationship of school uniforms to school safety has been quite a challenging task for both educators and researchers because the adoption of mandated school uniforms is often just one component of a larger school safety effort (Brunsma, 2004). “Disentangling the effects of [these] new policies and disciplinary procedures” to produce individual analysis of the school uniform policy has been a difficult task (DaCosta & College, 2006, p. 51). This fact has resulted in an abundance of anecdotal “evidence” to the effectiveness of school uniform policies with rarely anyone turning to research to prove or discount the results (Brunsma, 2004). Brunsma (2004) noted as school administrators and policy makers struggle with

decisions of how to improve the safety of their schools and consider school uniforms, they “get swept up in the tide of anecdote and perception, limiting their ability to make informed, prudent decisions” (p. 21).

The impetus behind the formulation and adoption of the school uniform movement in the United States has primarily been in response to a concern for safety as increased levels and occurrences of violent acts and school crimes erupted in the late 1980s and 1990s (Anderson, 2002; *Manual of School Uniforms*, 1996), and although unstated, this also seems to be the case of the recent surge in the numbers of high schools in North Carolina requiring school uniforms.

North Carolina is no different than the rest of the United States in regards to the increase of school violence in its schools over the last ten years. At the conclusion of the 1997-1998 school year, there were 7,543 incidents of school crime and violence, and at the conclusion of the 2007-2008 school year, the incidents of school crime and violence had increased to 11,276 (Retrieved October 18, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/schoolviolence/2001-02schoolviolence.pdf>; Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). During this same time period, the interest and usage of school uniforms in North Carolina high schools was birthed and has exponentially increased. One North Carolina local education agency (LEA), Halifax County, adopted school uniforms for its two high schools in the 2000-2001 school year, but other schools and LEAs across the state were slow to adopt similar policies. In the 2004-2005 school year, this began to change. Richmond County, another LEA in North Carolina, adopted uniforms for its high



school and the interest in the idea seemed to broaden. Since that year, at least one North Carolina LEA has adopted school uniforms each year for its high school(s), bringing the total to forty-five high schools in twenty-one LEAs for the 2009-2010 school year.

### Need for the Study

The issue of school violence is especially significant in North Carolina high schools where close to 57% of all North Carolina school crime and violence incidents occur. Crime and violence incidents in North Carolina high schools have steadily increased since the 2003-2004 school year. At the conclusion of that school year, there were 5,113 incidents, and by the close of the 2007-2008 school year, this number had risen to 6,418, an increase of over 25% (Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). These numbers are especially interesting due to the fact North Carolina high schools witnessed the surge in the adoption of school uniform policies during this same five-year time period, moving from only two high schools before the 2004-2005 school year to forty-five high schools by the beginning of the 2009-2010 school year.

This study will add to the knowledge base regarding the impact of school uniforms on school safety, thus providing information to assist policymakers and school administrators with future decisions regarding school uniforms.

### Statement of the Problem

With the steady increase of high schools in North Carolina requiring school uniforms during the 2004-2005 through 2008-2009 school years as a safety measure and with no sound empirical basis for their usage as a school violence deterrent

(Brunsma, 2004), this study is needed to determine the impact of school uniforms on school safety in these North Carolina high schools.

As one strategy to decrease school violence, not everyone agrees school uniforms have the potential to reduce incidents of crime and violence and increase school safety (Massare, 2003; Samuels, 2003; Washington-Labat, 2003). From just a brief observation of the numbers presented above on North Carolina high school violence incidents, it appears the implementation of school uniform policies in North Carolina high schools has resulted in few changes. The problem remains that very little empirical investigation has actually been applied to the issue of school uniforms and school safety nationally, (Brunsma, 2004) and in North Carolina particularly. This researcher is unaware of any past study, which has investigated whether the use of school uniforms by North Carolina high schools has resulted in any changes to the safety of these North Carolina high schools. The question becomes whether school uniforms are capable of impacting school safety. This study will attempt to address this problem by investigating whether the North Carolina high schools, which adopted school uniform policies during the 2004-2005 through 2008-2009 school years resulted in any changes to school safety.

#### Purpose of the Study

The purpose of this study was to explore the impact of school uniforms on safety in North Carolina high schools. It is well documented in the literature violence in public schools has sharply increased over the past ten years (Hill & Drolet, 1999; Massare, 2003; Shelton et al., 2009; Vairo et al., 2007). North Carolina has seen a 25% increase in the numbers of crime and violence incidents since 2003-2004 even though the

numbers of North Carolina high schools requiring school uniforms have surged during this same time period. Since school crime and violence incidents in North Carolina result in a minimum of out-of-school suspension or expulsion, it seemed necessary to investigate both of these measures when examining school safety. The researcher concluded the need to investigate how the adoption of mandatory school uniforms in North Carolina high schools in the 2004-2005 through 2008-2009 school years may have affected the numbers of crime and violence incidents and the occurrences of suspensions and expulsions at these schools.

#### Significance of the Study

In order for schools to be successful, the students, teachers, and administrators must feel safe in attending these organizations of learning (Wilson, 1999). Wilson noted, “fostering an atmosphere for students to learn and grow, requires a warm and protective place that is violence free” (p. 3). Whether school uniforms can create a school environment that is violence free, is yet to be determined, but as President William J. Clinton (1996) noted, “if school uniforms can help deter school violence, promote discipline and foster a better learning environment, then we should offer our strong support to the schools and parents that try them” (State of the Union, 1996).

The significance of this study is to better inform policy decisions related to mandatory school uniforms in high schools. The use of mandatory uniforms is a growing trend in North Carolina and across this nation with little empirical research existing on its potential to create safer schools (Brunnsma, 2004). This study may determine if the use of school uniforms in high schools in the state of North Carolina has resulted in safer institutions and campuses as determined by the reported offenses of crime and violence

acts, the numbers of suspensions and expulsions, and the experiences and perceptions of building-level administrators.

### Research Questions

Five research questions were considered for this study. They were:

1. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of reported incidents of crime and violent acts at these schools?
2. To what extent did the adoption of school uniforms policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the reported rates of crime and violence incidents per 1,000 students at these schools?
3. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina high school state rates of crime and violence incidents per 1,000 students for those same school years?
4. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of suspensions and expulsions at these schools?
5. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina High School state suspension and expulsion rates for those same school years?

## Overview of Methodology

This study incorporated a multiple-methods design utilizing both quantitative and qualitative data. The quantitative portion investigated several annual reports distributed by the North Carolina Department of Public Instruction (NCDPI), the Annual Report on School Crime and Violence, the Annual Study on Suspensions and Expulsions, the Consolidated Data Report, and the North Carolina School Report Card Data, in an effort to explore the possible relationship between school uniform policies and incidents of crime and violence and occurrences of suspensions and expulsions in North Carolina high schools. Pre- and post-school uniform policy adoption data for incidents of school crime and violence and occurrences of suspensions and expulsions in North Carolina high schools that adopted such policies during the 2004-2005 through 2008-2009 school years were examined for patterns and trends. The pre- and post-school uniform data at these high schools were also compared to the North Carolina state rates for incidents of crime and violence and occurrences of suspensions and expulsions for the same school years to explore possible connections.

The qualitative portion of this study examined an eight-item researcher-developed Likert-type survey. The survey was administered to current North Carolina administrators, principals and assistant principals, working in the high schools where school uniform policies were adopted between the 2004-2005 through 2008-2009 school years in an attempt to gauge their perceptions of how the adopted policy had changed the safety of their schools and their campuses. Each item was written in the format of “from my experience”, and respondents were forced to choose between strongly disagree, disagree, agree, or strongly agree. Survey item numbers one, two, six, and

eight dealt with general areas of school safety, which are often highlighted as areas of observed improvements in the school uniform research. Survey item numbers three, four, five, and seven asked respondents to provide their perceptions of whether the school uniform policy had resulted in fewer crime and violent acts and suspensions and expulsions. The survey was normed for use by North Carolina high school administrators, both assistant principals and principals, by piloting the instrument within one selected North Carolina school district. So as not to contaminate the data, the group selected to pilot the survey was one of the North Carolina school districts that adopted school uniforms for the 2009-2010 school year. This group of high school principals and assistant principals offered their opinions and criticisms of the wording and readability of the survey. The chair and methodologist of this researcher's dissertation committee also provided assistance with the development of the survey.

#### Definition of Terms

For clarification purposes, the following terms are defined:

*School uniforms* – a required style of clothing a district's or school's administration compels its students to wear during the regular school day. In most instances in North Carolina where school uniforms are required, the clothing consists of collared "polo" shirts with buttons and no visible logos and dark-colored slacks or khakis.

*School uniform policy* – a written policy adopted by a district's or school's administration outlining the permitted student clothing that must be worn during the regular school day.

*Uniformed school* – a school with an adopted mandatory school uniform policy.

*Non-uniformed school* – a school that has not adopted a mandatory school uniform policy.

*School violence* – an act of violence normally committed against a student by another student while attending school.

*School crime and violence incident* – one of the seventeen criminal acts North Carolina G.S. 115C-288(g) requires each school principal to notify law enforcement, including: homicide, assault resulting in serious bodily injury, assault involving the use of a weapon, rape, sexual offense, sexual assault, kidnapping, robbery with a dangerous weapon, robbery without a dangerous weapon, taking indecent liberties with a minor, assault on school personnel, bomb threat, burning of a school building, possession of alcoholic beverage, possession of controlled substance in violation of law, possession of a firearm or powerful explosive, and possession of a weapon (see Appendix A for a definition of each of the seventeen terms).

*Suspension/out of school suspension (OSS)* – when a student is removed from school by the school's administration for a period of one to forty-five days.

*Expulsion* – refers to a student being removed from school by the school's administration for the remainder of the school year; normally only utilized for the most severe school crime and violent incident like possession of a weapon, assault on school personnel, burning of a school building, etc.

*Traditional high school* - any public, non-charter, non-alternative, and non-early or middle college school containing grades 8-12, 9-12, or 10-12.

*Local education agency (LEA)* – a North Carolina local school district; there are 115 school districts/LEAs in North Carolina. These school districts are under the

supervision of the North Carolina Department of Public Instruction, but are controlled locally by a superintendent and a local board of education elected by voters within the region.

### Summary

The history of shootings and violent assaults in schools and districts across this country has left educators, policymakers, parents, and students demanding and searching for answers to this growing epidemic (Grant Feda, 2008; Massare, 2003; Shelton et al., 2009). In response to the deadly incidents of school violence and the concerns of parents, educators, and policy makers for the safety of their children and students while attending school, a variety of school safety strategies and measures have been implemented in United States public school districts and schools, including: anti-bullying campaigns, zero-tolerance policies, security cameras, walkie-talkies, random sweeps of lockers, ID badges, classroom phones, sign-in/sign-out procedures, expanded access to counseling, increased security personnel, school uniforms, fencing around schools, expanded exterior lighting, and even the use of metal-detectors (Grant Feda; Shelton et al.; Retrieved November 25, 2007, from <http://www.nea.org/schoolsafety/index.html>). School uniforms, a safety measure non-existent before 1987, has steadily increased in usage and has now been implemented in more than 25% of all public schools in the United States, although not everyone agrees to its use in public schools or to its effectiveness as a school safety strategy (Brunsma, 2006; Washington-Labat, 2003).

In North Carolina, as in the rest of the United States, the adoption of mandatory school uniforms has increased in recent years as a trend to improve the safety of



schools and their campuses (Retrieved June 10, 2009, from <http://www.ncpublicschools.org/docs/fbs/resources/newsletters/panews/2005panews.pdf>). This fact is especially true in North Carolina high schools, where only one school district and its two high schools had such policies prior to the 2004-2005 school year, but at the beginning of the 2009-2010 school year, twenty-one school districts and forty-five high schools had implemented school uniform policies. The use of school uniforms to increase school safety in North Carolina high schools is still in question since the incidents of school crime and violence have also increased during this same time period. With no known study to investigate the impact of school uniforms on the high schools in North Carolina, this study may shed some light on this issue by examining whether the adoption of mandatory school uniforms by North Carolina high schools between the 2004-2005 through 2008-2009 school years impacted the total reported numbers of crime and violence acts and the total reported numbers of suspensions and expulsions at these schools. Potentially more important to the practitioners, school administrators, and policy makers, will be the first-hand accounts and perceptions of current North Carolina administrators working in these schools and on these campuses.

This research study was designed as a traditional five-chapter dissertation. The first chapter included a basic introduction to the study, which will now be followed by a comprehensive literature review in chapter 2, a thorough explanation of the research design and methods in chapter 3, a host of tables will present the findings in chapter 4, and chapter 5 will close the study with the conclusions, implications, and recommendations for future research. Some redundancy will be noticed within the

chapters, but this was necessary to improve readability and provide emphasis to pertinent information of this research study.

## CHAPTER 2: REVIEW OF RELATED LITERATURE

The purpose of this study was to explore the impact of school uniforms on safety in North Carolina high schools. It is well documented in the literature that violence in public schools has sharply increased over the past ten years (Hill & Drolet, 1999; Massare, 2003; Shelton et al., 2009; Vairo et al., 2007). North Carolina has seen a 25% increase in the numbers of crime and violence incidents since 2003-2004 even though the numbers of North Carolina high schools requiring school uniforms have surged during this same time period. Since school crime and violence incidents in North Carolina result in a minimum of out-of-school suspension or expulsion, it seemed necessary to investigate both of these measures when examining school safety. The researcher concluded the need to investigate how the adoption of mandatory school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years may have affected the numbers of crime and violence incidents and the occurrences of suspensions and expulsions at these schools.

Topics explored in this chapter are: (a) the history of school uniforms, (b) school violence, (c) school uniform and school safety research, and (d) history and adoption of the North Carolina Annual Reports. A summary of the literature review concludes the chapter.

Before examining the history of school uniforms, it is necessary to point out that much of the research contained in this section and throughout this dissertation comes from one researcher, David Brunσμα. Brunσμα has an extensive research experience with school uniforms beginning in 1998 with the publication of he and Rockquemore's foundational study, *Effects of student uniforms on attendance, behavior problems,*

*substance use, and academic achievement.* He has conducted at least one small-scale study in Mt. Carmel, Pennsylvania, written at least one journal article reviewing the literature on school uniforms, and authored two books, *The school uniform movement and what it tells us about American education: A symbolic crusade* in 2004 and *Uniforms in public schools: A decade of research and debate* in 2006. In his 2004 book, Brunnsma also pointed out that it is not true that no empirical research exist on school uniforms, but the research that does exist lies in dissertation form, unpublished in any other type of venue or setting.

### The History of School Uniforms

Brunnsma (2004) acknowledged no definitive history exists on school uniforms, but he stated, “school uniforms, as we see in contemporary public schools, have their roots in the confluence of secular and religious influences that contextualized the earliest universities in Germany, France, and England” (p. 3). Brunnsma (2004) added, “rigid regulations on clothing, grooming, and other such socially and culturally rooted behavior hails, in England, from its earliest universities”, such as Cambridge, which sought to keep, “the flamboyancy of fashion in the society outside the ivory tower” (p. 4). The model for school uniforms in England was derived from the clothing worn by poor, orphan boys and girls in Christ’s Church Hospital during the sixteenth century symbolizing their underprivileged status (Davidson & Rae, 1990). School uniforms in England were utilized as a means “for indoctrinating the masses” (Brunnsma, 2004, p. 5). “The unstated message was: ‘you are a mass, you are the same, you will take your rightful place among the working mass in the industrial machine’” (Brunnsma, 2004, p. 6). As school uniforms became more prevalent in England and later in the United States

their use began to symbolize an elite status—those that could afford private and/or parochial schools. Brunσμα (2004) noted, “requirements of standardized dress [school uniforms] include a symbolic rhetoric of legitimate authority, a reservoir of institutional and organizational values of the school, and a method of social and cultural control over cohorts of students moving through the system” (p. 6). Although school uniforms survived in England for many centuries, their use has slowly dissipated and has even been abolished by many of the educational institutions in that country, but their legacy, history, and impact on the use of school uniforms in the United States cannot be denied (Davidson & Rae).

In the United States, “the [school] uniform has strong roots in the private/parochial sector—primarily as a symbolic marker of class status” (Brunσμα, 2004, p. 9). By the early 1960s, nearly 1 out of 2 Catholic schools utilized school uniforms, a policy that had basically been unquestioned up until this point (Brunσμα, 2004). Beginning in the 1960s, school uniform protest began. These protests centered on the invasion of parental rights and responsibilities, the promotion of conformity and similarity, cost, and the notion that elimination of social and class boundaries were not “real world” (Myers, 1963). In the 1960s and throughout the 1970s, high school students began to fight victoriously against school dress codes (Brunσμα, 2004). The issue of concern in these battles was freedom of speech and expression and whether the clothing being challenged really was capable of producing distractions (Brunσμα, 2004). These challenges and victories to mandatory school dress codes by parents and students during these two decades only added to the concerns and questions of the use of school uniforms in the United States (Brunσμα, 2004).

A host of social and educational issues in the United States during the 1980s ushered in the current movement of school uniforms in the public schools (Brunnsma, 2006). The AIDS crises, homelessness, teenage pregnancy, and the release of *A Nation at Risk* caused many Americans to question the supremacy of the United States and ushered in a concern of the decaying public education in our country (Brunnsma, 2004). Of primary concern, was the release of *A Nation at Risk*, which highlighted a commissioned investigation of the United States Public Education System by President Reagan and concluded, “the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people” (National Commission on Excellence in Education, 1983). Brunnsma (2004) argued, “*A Nation at Risk* provided the context of irrational and misguided fear about our schools that turned back the tide of student rights and freedoms and paved the road for ideas” (p. 15), such as uniforming public school students.

Richburg and Cooke (1980) noted the first discussion on uniforming public school students was held by Washington DC Mayor Marion Barry and his administration in 1980. These discussions were prompted by recent violent attacks around many of the schools in the area. Barry was hopeful the idea of “standardized dress” would “foster school spirit, save parents money, and deter the infiltration of outsiders into public school campuses” (Brunnsma, 2004, p. 14). Although the idea failed to catch on at the time, the notion of uniforming public school students was birthed and would soon become reality.

The first public school to receive any publicity for its use of school uniforms was Cherry Hill Elementary School in Baltimore, Maryland. Cherry Hill Elementary, which

served a predominantly black low to middle class community, adopted school uniforms in the fall of 1987 to reduce clothing cost and ease social pressure (Brunsma, 2004). A closer investigation into the policy formation reveals school uniforms at Cherry Hill and at four other Baltimore area schools was linked to a 1986 Baltimore shooting where a public school student was shot and wounded in a fight over his \$95 sunglasses (Baker & Michael, 1987). As Baker and Michael noted, this “last straw” was the momentum needed to implement a policy that had long been discussed. Other schools in and around the area followed the lead of Cherry Hill, and by the close of the 1987-1988 school year, Baltimore had five schools who had initiated school uniforms and Washington DC had three schools that had adopted the project (Brunsma, 2004).

As the 1988-89 school year approached, the movement of uniforming public school students in the Baltimore and Washington DC areas was rapidly spreading. As school began, fifteen more Baltimore schools and 41 Washington DC schools, including two junior highs, had adopted the use of school uniforms (Brunsma, 2004). In the fall of 1988, the school uniform movement that had begun in Baltimore and Washington DC migrated north to schools in Connecticut and New Jersey (Curry, 1988; Lewis, 1988), as poor predominately urban elementary schools learned of the successes being experienced in and around the Nation’s Capital (Brunsma, 2004).

The public school uniform movement was quickly spreading in underprivileged, urban elementary schools, but on October 6, 1988, the idea of public school uniforms in all United States schools was advanced. New York City mayor Ed Koch and school chancellor Richard Green voiced their support for the initiative, and soon afterward, in

the fall of 1989, a pilot program was begun in several of the city's schools (Brunsma, 2004).

As the movement of public school uniforms gathered momentum, 1988 also saw an increase in opposition toward such policies (Brunsma, 2004). In an article in the New York Times, one member of the Connecticut Civil Liberties Union called the policy "blatantly unconstitutional", and others expressed uniforming public school students was a step backwards in terms of civil rights and freedoms gained in the student dress code litigation of the 1960s and 1970s (Comer, 1988; New Haven School to require uniforms, 1988; What's wrong with public school uniforms, 1988).

As the 1990s began, the movement of public school uniforms was spreading in the United States. By the beginning of the 1990-1991 school year, school uniform policies had been implemented in several large, urban United States cities including Philadelphia, Miami, Detroit, Los Angeles, and Chicago, but for the most part these adoptions were voluntary, sporadic, and directed at troubled, underprivileged elementary schools (Brunsma, 2004). This would soon change.

Most noteworthy in the movement to public school uniforms was the 1994 unanimous decision by the Long Beach Unified School District (LBUSD) in Long Beach, California to adopt mandatory school uniforms for all of its K-8 schools following an eleven schools five-year experiment (Melvin, 1994). Reasons cited by LBUSD school officials and policy makers for the implementation of such a monumental policy, "were to combat gang wear/colors, to quell the competition and fury among students over designer clothing, to level economic disparities, and to help students focus on learning" (Brunsma, 2004, p. 19). Carl Cohn, the LBUSD superintendent, speaking about the



move to school uniforms, stated the move was made for, “safety, pure and simple” (Sterngold, 2000, p. A23). Fearing potential legislation over the implementation of a “mandatory” district-wide school uniform policy, Melvin noted the LBUSD decided to set aside \$175,000. A district-wide mandatory policy was a new era in the school uniform movement, and the concern was since no transfer non-uniform school was available the policy may be challenged (Brunsma, 2004). This fear was somewhat squelched later when the California Legislature and Governor Pete Wilson developed and signed into law Senate Bill 1269, which read:

The children of this state have the right to an effective public school education. Both students and staff of the primary, elementary, junior and senior high school campuses have the constitutional right to be safe and secure in their persons at schools. However, children in many of our public schools are forced to focus on the threat of violence and the messages of violence contained in many aspect of our society, particularly reflected in gang violence. ‘Gang-related apparel’ is hazardous to the health and safety of the school environment ... The adoption of a school-wide uniform policy is a reasonable way to provide some protection for students. A required [school] uniform may protect students from being associated with any particular gang (California Education Code, 1994).

Soon after LBUSD’s bold move to mandatory school uniforms and the enactment of Senate Bill 1269, other school systems in California and across the United States adopted similar policies; including schools in the major United States cities of Miami, New York City, Seattle, Los Angeles, and San Diego (Brunsma, 2004).

Although policies mandating public school uniforms and laws allowing their implementation were gaining momentum, Brunσμα (2004) noted, “the spark that would truly light the fire was just around the corner” (p. 20). In his 1996 State of the Union Address, President William J. Clinton spoke these words and ignited the school uniform frenzy: “I challenge all our schools to teach character education, to teach good values and good citizenship. And if it means that teenagers will stop killing each other over designer jackets, then our public schools should be able to require their students to wear school uniforms” (State of the Union, 1996). Soon after he advocated school uniforms in his State of the Union Address, President William J. Clinton instructed the Department of Education to develop a manual of how to legally enforce school uniforms and to provide examples and implementation guidelines (Bedard, 1996; Ryan & Ryan, 1998). The manual was mailed on February 24, 1996 to all of America’s 16,000 public school districts (Brunσμα, 2004; *Manual on School Uniforms*, 1996).

The support from the White House did not end with the speech and the development and distribution of the manual. President William J. Clinton continued advocating the use of school uniforms throughout the spring of 1996, emphasizing the role school uniforms could play in potentially reducing school shootings like the ones in Moses Lake, Washington, and St. Louis, Missouri (Presidential Radio Address-Clinton’s Memorial Day Address, 1998; Remarks prior to a roundtable discussion on school uniforms in Long Beach, CA, 1996). Brunσμα (2004) noted, “by the end of that crucial year [1996], the word was out, and a movement was solidly underway in the United States” (p. 20).

President William J. Clinton continued to tout the successes of school uniforms and even spoke in the summer of 1998 to the American Federation of Teachers on the potential effects school uniforms could play on school shootings like the one in Springfield, Oregon (Brunsma, 2004). By the close of that year, the following two “new” school uniform developments caused many to reexamine their policies; several schools were having issues with compliance from teachers and parents as they began to see their role as “fashion police” (Saslow, 1998), and a detailed, empirically sound study from Brunsma and Rockquemore (1998) was released questioning the perceived positive, long-held beliefs, assumptions, and “research” on the effectiveness of such policies (Brunsma, 2004). Just as school uniforms and the effectiveness of such policies were beginning to be questioned, the massacre at Columbine High School in Littleton, Colorado occurred. This tragic incident emblazoned the movement to public school uniforms as a link to clothing and the school shooting was noted (Sommers, 2001).

As a new century was on the horizon, the public school uniform movement was facing litigation. Parents from across the United States, with the assistance from such groups as the American Civil Liberties Union, fought against the mandate of school uniforms (Brunsma, 2004). As the incidents of school violence and school shootings continued, school uniforms were being hyped as a potential to end such tragedy. With this being the case, judges from across the United States were hesitant to rule against their use (Brunsma, 2004).

As the 2000-2001 school year started, school uniforms were being used in thirty-five of the fifty states in the United States, and New York City saw approximately 1/4 of its elementary schools move to the policy (Sterngold, 2000). Zernike (2002) noted a

safety study conducted by the Center for Disease Control (CDC) found nearly 10% of all public schools in the United States utilized school uniform policies.

As the school uniform movement began to somewhat stall again, the tragic events that occurred on September 11, 2001 seemed to swing the momentum. Brunσμα (2004) wrote, the events of 9/11 and the fallout afterward had the following three effects pertinent to the school uniform movement: “the path of limited freedoms and privacy rights continued, Americans’ suspicions increased as well as their faith in government, and the irrational culture of fear in the United States was exponentially elevated to unprecedented heights” (p. 22).

As events such as the Columbine shootings, 9/11, and more frequent school shootings escalated the discussion and implementation of school uniforms in some parts of the United States, other school systems and schools began to question, suspend, or even eliminate their policies on school uniforms (Brunσμα, 2004). Many school systems across the United States were still leery of mandating school uniforms without an opt-out provision, so many schools and school systems had developed their policies with provisions allowing students to opt-out of schools requiring uniforms and go to another school in the area. As the opting out became more frequent, some schools and school systems abandoned the policy (Brunσμα, 2004). As some parts of the country began to abandon school uniform policies in response to the opting out, other parts of the country escalated their discussion and adoption of school uniforms in response to increased incidents of school violence (Brunσμα, 2004). This seems to be the case in North Carolina as the number of high schools implementing school uniforms surged during the 2004-2005 through 2008-2009 school years; the same five-year time

period where crime and violence incidents increased 25% in North Carolina high schools.

### History of School Uniforms in North Carolina

North Carolina is no different than the rest of the United States in regards to the increase of school violence in its schools over the last ten years. At the conclusion of the 1997-1998 school year, there were 7,543 incidents of school crime and violence, and at the conclusion of the 2007-2008 school year, the incidents of school crime and violence had increased to 11,276 (Retrieved October 18, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/schoolviolence/2001-02schoolviolence.pdf>; Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). The issue of school violence is especially significant in North Carolina high schools where close to 57% of all North Carolina school crime and violence incidents occur. Crime and violence incidents in North Carolina high schools have steadily increased since the 2003-2004 school year. At the conclusion of that school year, there were 5,113 incidents and by the close of the 2007-2008 school year this number had risen to 6,418, an increase of over 25% (Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). During this same time period, the interest and usage of school uniforms in North Carolina high schools was birthed and has exponentially increased. One North Carolina local education agency (LEA), Halifax County, adopted school uniforms for its two high schools in the 2000-2001 school year, but other schools and LEAs across the state were slow to adopt similar policies. In the 2004-2005 school year, this began to change.

Richmond County, another LEA in North Carolina, adopted uniforms for its high school, and the interest in the idea seemed to broaden. Since that year, at least one North Carolina LEA has adopted school uniforms each year for its high school(s), bringing the total to forty-five high schools in twenty-one LEAs for the 2009-2010 school year.

One of the primary reasons for the rapid expansion of school uniforms in the United States and in North Carolina was safety as incidents of school violence and crime escalated (Brunsma, 2004). Shelton et al. (2009) stated, “school security has become a major issue around the country due to the increased level of violence” (p. 28). These authors added, “tragedies at Columbine High School in Colorado and more recently at Red Lake High School in Minnesota have forced administrators to take another serious look at safety measures at their institutions” (Shelton et al., p. 25). While investigating measures to hopefully make schools safer, a variety of suggestions, strategies, actions, and procedures have been implemented: including, video surveillance, metal detectors, increased security personnel, and even school uniforms (Shelton et al.).

#### School Uniforms and School Safety Research

Although much has been written to the contrary, Brunsma (2004) stated, “it is not true that there has been no empirical research conducted to assess the effectiveness of school uniforms” (p. 27). When compared to the, “discussion and debate in this country about school uniforms...very little empirical research [exists]” (Brunsma, 2004, p. xxvi). The empirical research which does exist is often ignored or overshadowed by the anecdotal discourse or even undiscovered due to the fact much of it lies in dissertation form, unpublished in any other type of venue or setting (Brunsma, 2004). Writing about

these empirical school uniform studies and unpublished dissertations, Brunnsma (2004) acknowledged, “the extant research is wide-ranging in terms of samples, methodologies, definitions of key concepts, theoretical grounding, and implications” (p. 27).

In the early movement of school uniforms, the primary reason given for adoption was to reduce or eliminate gang-related incidents and school violence (Brunnsma, 2004). Analyzing the relationship of school uniforms to school safety was quite a challenging task for researchers because the adoption of mandated uniforms in a school district was just one component of a larger school reform effort (Brunnsma, 2004). “Disentangling the effects of [these] new policies and disciplinary procedures” to produce individual analysis of each policy has been a difficult task (DaCosta & College, 2006, p. 51). As the movement grew and more and more schools and local education agencies (LEAs) adopted uniforms, suggested outcomes and effects were added (Brunnsma, 2004). This fact has resulted in an abundance of anecdotal “evidence” to the effectiveness of school uniform policies with rarely anyone turning to research to prove or discount the results (Brunnsma, 2004). As school administrators and policy makers struggle with decisions of how to improve the safety of their schools and consider school uniforms as a viable option, they “get swept up in the tide of anecdote and perception, limiting their ability to make informed, prudent decisions” (Brunnsma, 2004, p. 29). Thus, making it difficult to determine the true impact of school uniforms on the safety of the schools that have implemented them.

Although some early writings and research concerning school uniforms as a potential school safety measure surfaced in 1991, the bulk of what has been written on

this topic began in 1994 (the year of the Long Beach Adoption) and peaked between 1996-2000 (the year of President William J. Clinton's acknowledgement and his subsequent discussions on uniforms) (Behling, 1994; Black, 1998; Brunnsma & Rockquemore, 1998; Buckley, 1996; Chaika, 1999; Hinchion-Mancini, 1997; King, 1998; Murphy, 1997; Paliokas, Futrell, & Rist, 1996; Portner, 1998; Posner, 1996; Thompson, 1999; Volokh & Snell, 1998; White, 2000; Wilkins, 1999; Williams-Davidson, 1996). The primary research on the topic of school uniforms and its relation to school safety and school discipline can be categorized into three areas: (a) perception studies, (b) small-scale effectiveness studies, or (c) large-scale effectiveness studies (Brunnsma, 2004).

Perception studies usually contain questionnaires or surveys given to parents, teachers, administrators, and even students on how they believe school uniforms are affecting their schools and campuses. A more stringent measure of school uniforms is the small-scale effectiveness studies, which usually involve one school and its involvement with school uniforms, a comparison between two schools usually one with uniforms and one without, or even a school district's involvement with school uniforms. The third category, large-scale effectiveness studies, is the most elaborate and scientific (Brunnsma, 2004). Large-scale effectiveness studies typically involve large, national data sets and compare multiple schools, some with uniforms and some without, across all grade levels and parts of the country. Whereas perception studies are clearly anecdotal and rely on mainly opinion, the effectiveness studies are normally more empirical and most often test the anecdotal hypothesis to determine whether school uniforms affect the school-related variables being explored (Brunnsma, 2004).



## *Perception Studies*

Most perceptions studies are anecdotal and simply offer, “a glimpse into the opinions, feelings, gut reactions, and observations” on the topic of public school uniforms (Brunsma, 2004, p. 33). King (1998) noted perception studies are one way for researchers to assess the effectiveness of school uniforms and whether they aid in preventing violence. Brunsma (2004) feels perception studies are important because they aid in helping one identify and understand the feelings of educators, parents, and students on the topic of school uniforms, as well as understand the “ideology of the movement” (p. 39). Whether perception studies actually assist in determining if school uniforms can help prevent violence or just help to clarify the rationale behind the school uniform policy adoption is unclear, but their benefit cannot be denied and should be investigated when researching the topic of school uniforms (Brunsma, 2004).

Between 1992 and 2004, there were at least sixteen perception studies written on school uniforms exploring school safety related variables (Barton, Coley, & Wenglensky, 1998; Behling, 1994; Brunsma, 2004; DeLong, Kim, & Koh, 2002; DeMitchell, Fossey, & Cobb, 2000; Fosseen, 2002; Gullatt, 1999; Jones, 1997; McCarty, 1999; Murray, 1996; NAESP, 2000; Scherer, 1992; Tucker, 2006; Virginia State Department of Education, 1992; West, Tidwell, Bomba, & Elmore, 1999; Wilson, 1999). Nine of the studies produced positive results concerning school uniforms and safety (Murray; DeLong et al., 2002; DeMitchell et al., 2000; Fosseen; Jones; McCarty; Scherer; Virginia State Department of Education; Wilson), five produced mixed results regarding school uniforms and safety (Behling; Gullatt; NAESP; Tucker; West et al., 1999), and two produced negative or no results on safety from the use of school

uniforms (Barton et al., 1998; Brunσμα, 2004). A closer examination of the methods and the participants of these perception studies help to clarify the findings of the researchers.

### *Positive Findings and Perception Studies*

Scherer (1992) utilized responses from teachers at one elementary school in Milwaukee, Wisconsin to conclude school uniforms can lead to improvements in student discipline and decreases in school violence.

The Virginia State Department of Education (VSDE) (1992) investigated school uniforms by surveying seven urban school districts with existing school uniform policies and noted six of the school districts felt the policy had produced the intended outcomes and had reduced discipline referrals. The VSDE noted several positive reasons for schools to consider uniforms, including reduction in crime.

Murray (1996) investigated how school uniforms can affect a school's climate by administering the National Association of Secondary School Principals (NASSP) School Climate Survey to 153 randomly sampled middle school students with a school uniform policy and 153 randomly sampled middle school students without a school uniform policy from two similar urban middle schools. Murray concluded the uniform school had higher means in 9 of the 10 subscales of the survey, and for the subscale security and maintenance, students' responses from the uniform school were found to be statistically higher at the  $p < .01$  level than responses from students of the non-uniform school.

Jones (1997) investigated the perceived changes in school culture and suspension rates in two Long Beach Unified School District middle schools by interviewing ten staff members after the district's move to mandatory school uniforms.

He concluded school uniforms had resulted in dramatic improvements to the level of safety provided by the school (Jones).

McCarty (1999) investigated students' perceptions of a mandatory school uniform policy at a large urban middle school three years after the implementation of the policy by surveying current students of the school as well as students attending another similar middle school not requiring school uniforms. McCarty concluded students attending the middle school requiring school uniforms had lower levels of fear and lower levels of fear of personal harm when compared to the students attending the middle school not requiring school uniforms.

Wilson (1999) utilized a school violence survey and a national database of practicing principals to gather 141 school administrators' perceptions of school uniforms on school violence from four different regional urban school districts. Utilizing both uniform and non-uniform schools, as well as random selection of principals, Wilson discovered principals from schools with uniforms perceived their schools safer than principals from schools without uniforms at the  $p < .01$  alpha level.

DeMitchell et al. (2000) randomly selected 240 elementary, middle, and high school principals from a national United States database to determine how school uniforms impacted several school-related variables. Their findings revealed middle school principals favored the use of school uniforms most, followed by elementary principals, and then high school principals. Pertaining to school safety, the researchers noted most principals believed school uniforms reduced peer sexual harassment (DeMitchell et al.).

DeLong et al. (2002) investigated nine high schools within two cultural settings, three public high schools in the St. Paul/Minneapolis area and six private high schools in South Korea, to compare the perceptions of students, teachers, and parents concerning wearing school uniforms. Parents from the three United States high schools and teachers from the six South Korean high schools noted school uniforms could help reduce the gang presence in the school (DeLong et al.).

Fosseen (2002) investigated whether the perceptions of students as related to connectedness and feelings of safety changed with the type of school uniform adopted by the school. 1,032 sixth, seventh, and eighth grade students from ten economically disadvantaged middle schools in Houston and San Antonio were included in the study. Fosseen concluded the type of clothing worn by students at school could contribute to a student's connection to that school and noted, "school uniforms, especially for boys, ... promotes belonging and social bonding [and] may prove an effective intervention to help reduce violence and enhance safety in schools" (as quoted in Brunnsma, 2006, p. 112). These perception studies regarding school uniforms and school safety concluded positive results, but others due to missing or unstated results produced more mixed findings.

#### *Mixed Findings and Perception Studies*

Behling (1994) investigated how choice of clothing affects high school students' and teachers' perceptions of behavior and academic potential by displaying photographs containing college-aged males wearing four different types of clothing, typical school clothes (casual nonuniform), a "bummy" look (jeans, sweatshirt, and a jacket), a standardized dress school uniform (khakis and a polo), and a formal, dressy

school uniform to 270 high school sophomores and 20 high school teachers from two different schools, one religious private school and one public high school. Findings revealed students wearing either type of school uniform were perceived as better behaved by both teachers and students leading Behling to conclude the effects of school uniforms are produced by a “halo effect” where teachers perceive them to result in changes even though little to no change really occurs. Hinchion-Mancini (1997) also noted, “the benefits of [school] uniforms are more perceptual than real” (p. 63).

Gullatt (1999) surveyed all sixty-six Louisiana public school superintendents as well as all fifty state superintendents to assess their stance on school uniforms and their effectiveness. Nearly one-third of the state superintendents and two-thirds of the Louisiana district superintendents felt school uniforms could reduce gang activity (30% and 62%); no information on the stance or opinions of the other 2/3 of state superintendents or 1/3 of Louisiana district superintendents was provided giving little credibility to this study.

Tucker (2006) explored school uniforms and their effects on teacher perceptions’ of school climate by utilizing surveys and focus groups at four middle schools, two with school uniforms and two without. Although the results from the survey showed no statistical differences between teachers’ perceptions of security and safety at uniform and non-uniform schools, the focus group interviews revealed another story. Teachers at the uniform schools reported they felt safer at their campuses since the introduction of school uniforms because it was now easy to identify outsiders and students could no longer wear baggy clothes that could hide weapons or contraband. The findings of the focus group interviews led Tucker to conclude school uniforms can enhance teachers’

perceptions of safety, but are not a cure-all or substitute for good management, the utilization of research-based practices, and the support of stakeholders from the school.

West et al. (1999) investigated 4<sup>th</sup> grade parents' attitudes toward school uniforms. Four hundred twenty-six surveys were distributed to fourth grade parents in Lafayette County, Mississippi with a return rate of 33.8%. Fifty-six percent of the parents surveyed favored the use of school uniforms and felt they had the potential to discourage violence, but no data on the other 44% of parents reactions or opinions were provided.

A collaboration between the National Association of Elementary School Principals (NAESP) (2000) and Lands End, a clothing and uniform supplier, led to a national telephone survey of 755 practicing principals to uncover their feelings about school uniforms. Sixty-two percent of the surveyed principals felt school uniforms could improve the safety of their schools, but no information was presented on the other 38% of the surveyed principals. The findings from these perception studies highlight positive results regarding school uniforms and safety, but either intentionally leave out or just fail to report additional findings. The final two perception studies produced no positive results, and instead, found school uniforms to produce no change or worsen school safety.

#### *No or Negative Change and Perception Studies*

Barton et al. (1998) administered a survey to determine the effects of ten school discipline and security policies to a large scale, national data set containing over 4,500 high school seniors. The survey asked participants to respond to their feelings of how school discipline and security policies had affected their school and their school

campuses, with school uniforms being one of the ten policies investigated. Barton et al. concluded school uniforms had no impact on school discipline in public, private, and/or parochial schools.

In his book, *The School Uniform Movement and What It Tells Us about American Education: A Symbolic Crusade*, Brunnsma (2004) utilized two national data sets to conduct two studies on whether school uniforms impact students' and administrators' perceptions of school safety. From his study with the older data set, Brunnsma (2004) concluded, "school uniform policies do not significantly alter eighth-grade students' perceptions of their school's safety climate", and "school uniforms have a significant negative effect on principals' perceptions of the safety climate in their schools" (pp. 109-110). Utilizing a similar methodological design and the more current data set, Brunnsma (2004) concluded, "there is no significant effect of uniform policies on principals' perceptions of the safety climate of their elementary schools" (Brunnsma, 2004, p. 111).

The limitation with perception studies is the lack of empirical results. King (1998) and Paliokas et al. (1996) suggested the following three strategies to produce empirical results of school uniforms and their effectiveness to produce change: (a) utilize trend analysis (compare data over a certain period of time) to conclude whether the changes produced in the school and/or district continue over time; (b) utilize an experiment and control group to compare changes in uniform schools versus non-uniform schools; and (c) utilize control variables to separate coincidental findings from true, accurate cause and effect findings.

### *Small-Scale Effectiveness Studies*

Eleven studies utilizing small samples and following the advice of King (1998) and Paliokas et al. (1996) have been written on the effects of school uniforms and school-safety related variables (Bollinger, 2002; Brunnsma, 2002; Draa, 2005; Grant Feda, 2008; Hoeffler-Riddick, 1999; Massare, 2003; Pate, 1998; Samuels, 2003; Stevenson, 1999; Washington-Labat, 2003; Williams, 2003). Six of the small-scale studies produced positive results regarding school uniforms and school safety (Bollinger, 2002; Grant Feda, 2008; Massare, 2003; Pate, 1998; Samuels, 2003; Williams, 2003), two highlighted mixed results for school uniforms and school safety (Draa; Washington-Labat), and three reported no change to school safety (Brunnsma, 2002; Hoeffler-Riddick; Stevenson). A closer examination of the methods and participants of these studies help to better portray their contributions to the school uniform and school safety research.

### *Positive Results and Small-Scale Studies*

Pate (1998) compared the number of crime and violence incidents and referrals to juvenile authorities made at 64 elementary schools in the Miami-Dade County School District the year before school uniform implementation (1995-96), the year of school uniform implementation (1996-97), and three years after the school uniform implementation (1997-2000). Her results showed significant ( $p < .05$ ) decreases in the number of incidents of crime and violence for the 1996-97 school year (about a 50% decrease), and this finding was still statistically significant after the 1999-2000 school year. Pate noted mandatory school uniforms can be one method of assisting students



with transforming their peer identity of juvenile delinquency to more socially acceptable and responsible behaviors.

Bollinger (2002) investigated the effects of mandatory school uniforms on student discipline and the school climate of an urban middle school via a causal-comparative design utilizing both a middle school without school uniforms and a demographically similar middle school from the same school district with school uniforms. Bollinger showed the rate of discipline referrals per student at the school mandating uniforms to be statistically significantly lower at the p value of  $< .001$  when compared to the discipline referrals per student at the middle school without uniforms. Bollinger found the school with uniforms to have less discipline referrals per student across all ethnic groups (except Asian/Pacific Islander students during one school year), across gender, and across all grade levels when compared to discipline referrals per student at the other school. Bollinger concluded, “the adoption of a mandatory school uniform policy in a school ... with minority populations of Hispanic and/or African-American students would possibly result in significantly greater improvement in the Hispanic and African-American student populations than in White and Asian/Pacific Islander student populations” (p. 140).

Massare (2003) utilized descriptive methods and anecdotal discipline records from two elementary schools and one middle school in New Jersey to examine school uniforms and its effect on discipline referrals. Pre-school uniform discipline records were compared to post-school uniform records in all three schools for a three year time period in the following eight discipline referral categories: general discipline referrals, fight referrals, disrespect to staff, disrespect to peers, assault and battery referrals,

vandalism/arson referrals, suspensions, and expulsions. Although overall discipline referrals increased in all three schools after the introduction of school uniforms, the data present a different story when broken down into the school violence and school safety categories; fight referrals decreased by 36% in one of the elementary schools and remained relatively constant in the other two schools, assault and battery referrals decreased in all three schools with one of the elementary schools and the middle school showing nearly a 50% reduction, and vandalism and arson referrals were only recorded twice at the elementary schools and both happened in the 2<sup>nd</sup> year of school uniform implementation but the middle school reported a 500% reduction (Massare). Massare failed to comment on his findings related to discipline and school safety, but it does appear school uniforms played at least some part in reducing incidents of violence and crime on all three school campuses.

Utilizing the entire high school population in the Birmingham City Schools (BCS), Samuels (2003) examined all of the suspensions and expulsions during the 1993-1994 through 1998-1999 school years and classified them into the following categories based on the offense: minor, intermediate, or major. School uniforms, adopted for all Birmingham Public Schools in 1996, seemed to produce positive changes for all three levels of offenses and resulting suspensions. The number of minor offenses resulting in suspension decreased from 1,581 in 1995-96, the last year of student dress, to 495 in 1998-99, and the same trend can be viewed for intermediate offenses, 4,129 offenses in 1995-96 to 1,208 in 1998-99, and major offenses, 910 in 1995-96 to 505 in 1998-99. Samuels noted, “based on the reduced number of suspensions and expulsions in the

BCS, the mandatory school uniform policy relates to high school officials decreasing the outbreak of violence” (p. 91).

Williams (2003) investigated the impact of school uniforms on student attendance, student behavior, and student achievement in rural elementary schools and middle schools over a four-year time span, two-years prior to the implementation of a school uniform policy and two-years after implementation. Data were collected from the South Carolina State Department of Education’s web site on the thirty-seven schools and eight school districts that met the criteria for inclusion. Williams found a statistically significant reduction in out-of-school suspensions after the second year of school uniform implementation at the  $p < .01$  level. Mean scores for out-of-school suspensions declined from 18.67 the year before school uniforms to 12.23 two years after policy implementation.

Grant Feda (2008) investigated nine school violence prevention policies’ and seventeen assault deterrent methods’ impact on reported incidents of violence and assault against teachers and educators utilizing the Minnesota Educators Study data, a randomly selected sample of 26,000 licensed Minnesota educators working between June 2004 and December 2005 in both public and private schools in Minnesota. Grant Feda’s study employed an experimental design of 290 educators who had reported being physically assaulted within the last year by a student and 867 educators who had not been a victim of a physical assault by a student within the last year. The use of school uniforms was considered one of the seventeen assault deterrent methods. Utilizing multivariate analysis, the use of school uniforms showed the potential for reducing educators’ risk of physical assault by 48% (Grant Feda). These small-scale

studies produced positive results regarding school uniforms and safety, but others have produced results that are more mixed, with some positive findings and some neutral or negative findings.

#### *Mixed Findings and Small-Scale Studies*

Washington-Labat (2003) utilized a causal-comparative study and three independent t-tests to determine statistical differences in discipline referrals, in-school-suspensions, and out-of-school suspensions in two public school districts in South Mississippi, one which utilized school uniforms and one which did not. Although differences were clearly apparent between the two school districts for in-school suspensions, out-of-school suspensions, and total disciplinary referrals, no statistically significant differences were found for any of the three comparisons (Washington-Labat).

Washington-Labat stated:

Although a significant difference was not found in total number of discipline referrals, elementary schools studied had intriguing results. The school uniformed district had almost 90% less discipline referrals, in-school suspensions, and out-of-school suspensions than the non-school uniformed district at the elementary school level during the 3-year period ... the opposite was true at the middle and high school level. The uniformed district had at least 40% more discipline referrals, in-school suspensions, and out-of-school suspensions than that of the non-uniformed district" (p. 69).

Draa (2005) examined the relationship of school uniforms to student conduct in seventy high schools (64 without uniforms, 6 with uniforms) from eight urban school districts (4 with uniforms, 4 without) in Ohio utilizing a causal-comparative multiple time-

series design. Archival suspension and expulsion data were examined from the 1995-96 through 2001-02 school years utilizing the following four comparisons: same school comparison over time (compared same schools before and after school uniforms); intra-district comparison (compared schools with uniforms to other schools in the same district without uniforms); statewide comparison (compared all schools in the state with uniforms to schools without uniforms); and matched schools comparison (compared schools with uniforms to similar demographic schools without uniforms). The methods for this study led to thirty comparisons between uniform and non-uniform high schools. In seventeen of the comparisons, Draa found the school uniform policy produced effective or significant results (9 of 14 showed improvements in suspension rates and 8 of 16 showed improvements in expulsion rates): school uniforms were shown to reduce suspension rates in three out of five schools and to reduce expulsions in five out of six schools for comparison one, comparison two could not be determined for either suspensions or expulsions due to limited data, all four districts containing high schools with uniforms showed significant differences in their rate of suspensions when compared to the other districts not containing a high school utilizing uniforms but no significant differences were found for expulsions in comparison three, and for comparison four, findings revealed the uniform policy was effective for suspensions in all five of the schools where the comparisons could be made and in three out of the six schools for expulsions. Draa concluded the adoption of a school uniform policy cannot be dismissed as having no potential value; significant changes in at least one or more school-related outcomes are pretty common. The findings from these studies revealed

mixed findings regarding school uniforms and school safety, but others have produced no change to school safety.

### *No Changes to Safety and Small-Scale Studies*

Hoeffler-Riddick (1999) investigated a group of 146 9<sup>th</sup> graders who had spent two consecutive years in a middle school that had implemented school uniforms after their sixth grade year by utilizing the 6<sup>th</sup> grade year of these students as the baseline year and the next two years' data of students' attendance, discipline, grade point average, and self-esteem to determine the effects resulting from the school uniform implementation. Total number of discipline referrals declined significantly during the 1<sup>st</sup> year of school uniform implementation, from 796 total referrals during the non-uniform 6<sup>th</sup> grade year to 465 during the 1<sup>st</sup> uniform year, but rose significantly back to 646 total incidents during the 2<sup>nd</sup> uniform year. Hoeffler-Riddick stated, "data collected as part of this study do not support the notion that students who wear uniforms will ... behave better" (p. 89).

Stevenson (1999) investigated school uniforms and their impact on a number of school violence related variables at twenty-one public middle and high schools in Texas. Specific variables investigated included school uniforms and their impact on vandalism, weapon possession, fights, assault/battery, discipline, student attendance, suspensions, expulsions, and other school crimes. Stevenson found no significant decrease in the number of weapon possession incidents, no significant decrease in the occurrence of fights, no effect on the number of vandalism incidents, no effect on the number of assault/battery incidents, and finally, no significant difference in the number of school crime incidents.

Brunsma (2002) investigated behavioral incidents and more serious disciplinary violations (acts of violence and weapons violations) at one uniformed Pennsylvania elementary school and compared it with twenty-six other similar non-uniformed elementary schools in the region utilizing trend lines. For acts of violence, the uniform school had a decrease in incidents the first year, but by the second year the incidents returned to pre-policy adoption numbers. Comparing these results to the other 26 schools, Brunsma (2002) noted similar trends. For weapon violations, the results were different. For the uniformed school, only one incident of a weapon violation was reported for the six years the data were collected compared to the 1.5 weapon violations per school year average in the non-uniformed schools. Brunsma (2002) failed to attribute this finding to the school uniforms, instead insisting the data were flawed because the school-level data were inconsistent and had to be supplemented with data obtained from the Pennsylvania Department of Education. Brunsma (2002) noted it is a regrettable phenomenon, which he believes is fairly common: school-provided data are often inconsistent with state-collected data and cannot be trusted to produce truly reliable results.

Brunsma (2004) suggested small-scale effectiveness studies have assisted educators, policy makers, and researchers in the acquisition of a better and deeper understanding of how school uniforms impact certain schools, school districts, and geographical areas, but the results produced by these small-scale effectiveness studies must be seen as unreliable due to a variety of methodological flaws; namely the lack of adequate controlling variables and potentially flawed data collected at the school-level (Brunsma, 2004).

### *Large-Scale Effectiveness Studies*

Brunsma (2004) noted, “to empirically investigate questions regarding the effectiveness of school uniform policies ... requires large, longitudinal, nationally representative data sets; multivariate modeling techniques; and a wide variety of indicators and measures of the important processes” (p. xxxi). The utilization of multiple regression techniques, “allows for the simultaneous evaluation of multiple variables’ effects on a single outcome. It is a predictive modeling procedure that seeks to explain the variation in an outcome from a variety of sources” (Brunsma, 2004, p. xxxv).

There are only four studies, which fit the criteria above and can be classified as large-scale effectiveness studies. These studies (Brunsma, 2004; Brunsma & Rockquemore, 1998; Educational Testing Service, 2000; Stanley, 1996) utilized the strictest of methodological designs and large samples to arrive at their findings (Brunsma, 2004). Of these four studies, only one produced favorable results on school uniforms and school safety (Stanley), while the other three noted no changes to school safety from school uniforms.

### *Positive Findings and Large-Scale Studies*

Stanley (1996) investigated the implementation and effectiveness of school uniforms in the LBUSD (nearly 59,000 students) the year before the move to school uniforms and the year of policy implementation. The methodological design included perception surveys and an investigation of several disciplinary variables, including school violence incidents, suspension rates, and other school and classroom rule violations. Results of the survey showed 100% of the 65 administrators, 85.6% of the 97 school counselors, and 66.1% of the 2,050 classroom teachers felt school uniforms



assisted in providing a safer school environment. 71.2% of the 12,000 middle school students responded they did not feel safer at school, and 81% of those same middle school students and 77% of the 10,000 elementary school students noted no changes to the number of fights since the introduction of school uniforms (Stanley). From the discipline data, Stanley noted after the implementation of school uniforms the numbers of school crime and violence incidents decreased substantially; sex offenses declined 74%, robberies were reduced 65%, fighting decreased 51%, assaults involving deadly weapons declined 50%, assault and battery incidents decreased 34%, and incidents of vandalism declined 18%. Stanley cautioned against the use of her data to determine a cause and effect relationship by stating, "it is not clear that these results are entirely attributable to the uniform policy" (p. 431). This statement was based on the fact school officials and policy makers also implemented a number of other school safety measures at the same time as the move to school uniforms, including stricter discipline policies, increased numbers of school resource officers, and more teacher presence in the hallways during class changes (Brunsma, 2004). Although the results from Stanley's study produced mostly positive results from one large sample, the other three large-scale school uniform and school safety studies involved national data sets and produced no change to school safety.

#### *No Changes to Safety and Large-Scale Studies*

Brunsma and Rockquemore (1998) utilized the National Educational Longitudinal Survey data set (NELS:88), a large data set collected by the United States Department of Education's National Center for Educational Statistics that began with a national sample of 8<sup>th</sup> graders in 1988 and followed them every two years through college, and

its first follow-up in 1990 to study school uniforms and their impact on student attendance, achievement, drug use, behavior, and the school climate. Utilizing weighted regressions and alpha levels of  $p < .05$  and  $p < .01$ , Brunσμα and Rockquemore concluded school uniforms had no effect on student behavior and/or drug use and noted any perceived positive correlation between school uniforms and these variables resulted from a “Hawthorne Effect”. Brunσμα and Rockquemore stated, “instituting a uniform policy can be viewed as analogous to cleaning and brightly painting a deteriorating building in that on the one hand it grabs our immediate attention: on the other hand, it is only a coat of paint” (p. 60). Noting a limitation of this study, Brunσμα (2004) wrote, “readers should understand that the analyses using the ... NELS:88 base year and first follow-up are not used to look at the impact of [school] uniform policies in public middle and high schools” (p. xxxiii).

The Educational Testing Service utilized the NELS:88 data and its first two follow-up studies (1990 and 1992) to investigate numerous policies enacted to combat school violence and increase safety, including: zero-tolerance policies, on-site school resource officers, school uniforms, violence prevention programs, and the movement to downsize many schools across the country. Variables explored in the study ranged from academic achievement to student delinquency, which was examined by the occurrences of both serious and non-serious infractions and drug use. The Educational Testing Service (2000) concluded school uniforms had no effect on student delinquency and did not correlate with decreasing the number of violent incidents occurring at school. The NELS:88 data set and its follow-up data sets were captured before the

movement to public school uniforms erupted and are not necessarily reliable predictors of the effect of school uniforms on public school campuses.

In his book, *The School Uniform Movement and What it Tells Us About American Education: A Symbolic Crusade*, Brunnsma (2004) utilized a newer data set, the Early Childhood Longitudinal Study (ECLS), collected during the era of the school uniform movement (1998-2000), to replicate he and Rockquemore's 1998 study. Utilizing both controlling variables and multivariate regression, Brunnsma (2004) examined how school uniforms effected kindergartners and first graders self-control and coping skills, "since there is an overriding assumption that school uniform policies somehow act as a catalyst for a more disciplined and self-aware student" (Brunnsma, 2004, p. 164). Results showed, "school uniform policies do not significantly affect any of these outcomes at the elementary school level" (Brunnsma, 2004, pp. 165-166). Summarizing his extensive research with school uniforms and nationally representative data sets (NELS:88 and the ECLS), Brunnsma (2004) stated, "[school] uniforms have not been effective at attacking the very outcomes and issues they were assumed to aid" (p. 169).

This study represents an attempt to add to the research on school uniforms and its relation to school safety by examining how the use of school uniforms in North Carolina high schools affected incidents of school crime and violence and the occurrences of suspensions and expulsions. Before exploring the methods and participants of this study, the history and implementation of the school crime and violence reports in North Carolina schools must first be provided to better understand their current use for this research.

## History and Adoption of the North Carolina Annual Reports

The North Carolina General Assembly passed the Safe Schools Act in 1993. As a response to the passage of this act, two new laws emerged, General Statute (G.S.) 115C-12(21) and G.S. 115C-288(g), forming the requirements of the North Carolina Annual Report on School Crime and Violence. G.S. 115C-12(21) required the North Carolina State Board of Education (NCSBE) “to compile an annual report on acts of violence in the public schools”, and G.S. 115C-288(g) required each school principal to report the following seventeen criminal acts to law enforcement: homicide, assault resulting in serious bodily injury, assault involving the use of a weapon, rape, sexual offense, sexual assault, kidnapping, robbery with a dangerous weapon, robbery without a dangerous weapon, taking indecent liberties with a minor, assault on school personnel, bomb threat, burning of a school building, possession of alcoholic beverage, possession of controlled substance in violation of law, possession of a firearm or powerful explosive, and possession of a weapon (Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). Although it is unclear when the first North Carolina Annual Report on School Crime and Violence was released, the document has been uploaded to the NCDPI’s website each year since 2002. The data utilized in the annual report is collected from the Uniform System of Disciplinary Data Collection (USSDC), which is a statewide storehouse of disciplinary incidents from each school in North Carolina. The data in the USSDC are entered at the school level by a designated individual and normally reported for verification to a local educational agency (LEA) or district representative. The data are required to be uploaded to NCDPI by June 30<sup>th</sup> of each year, and it is then compiled and

submitted back to each school and LEA for verification. Each school principal and LEA superintendent reviews the data, highlights any discrepancies, and resubmits it to NCDPI in early September. Any discrepancies are reconciled, analyses are run, and the crime and violence data for every North Carolina school are generated into tables, charts, graphs, and figures. This allows for comparisons to be made to previous years data and among the different grade configurations of North Carolina schools, mostly kindergarten-fifth (elementary schools), sixth-eighth (middle schools), and ninth-twelfth (high school) (Retrieved October 18, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/schoolviolence/2006-07schoolviolence.pdf>).

The North Carolina Annual Report on Suspensions and Expulsions was created to meet the requirements of G.S. 115C-12(27). This law requires the NCSBE to report the number of students who have been suspended, expelled, or placed in an alternative learning program or school each year. It is unclear when the first North Carolina Annual Study of Suspensions and Expulsions was first released, but the 2000-2001 data were uploaded to the NCDPI's website in March, 2002. The data that forms this report are also gathered from the USSDC and highlights all short-term suspensions, long-term suspensions, expulsions, and assignments to alternative learning programs/schools in each LEA in North Carolina by gender and ethnicity (Retrieved October 18, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/suspensions/2006-07suspensions.pdf>). The data goes through similar verification steps as the crime and violence, but is performed more frequent, 2-3 times per year, instead of just once at the end of the school year. At the close of the 2007-2008 school year, the NCSBE began to

investigate the above incidents of school crime and violence in collaboration with occurrences of suspensions and expulsions due to the relationship between these factors and the fact students who commit one of the criminal acts almost always receive a minimum 10-day out-of-school suspension or expulsion (Retrieved March 4, 2009, from

<http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>). This new document, combining both of these reports with one additional annual report, is entitled the North Carolina Consolidated Data Report (Retrieved March 4, 2009, from

<http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>).

First released in 2008 by the NCDPI, the Consolidated Data Report combined the Annual Report of School Crime and Violence, the Annual Report of Suspensions and Expulsions, and the Annual Report of Dropout Rates into one document (Retrieved March 4, 2009, from

<http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>).

The decision to generate a consolidated report on school crime, suspensions, and dropout was grounded in the idea of a relationship between these factors ... the decision was warranted by small, but significant positive correlations that were discovered from the 2006-2007 and 2007-2008 data between crime and short-term suspension, between crime and dropout, and between short-term suspension and

dropout” (North Carolina Department of Education, North Carolina Consolidated Report, 2008, p. 8).

The consolidation of these three reports will be continued as the NCDPI hopes to untangle the combined effects of these three inter-related variables (Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>).

The North Carolina School Report Card was first introduced in 2001 in response to both state and federal mandates to develop an annual report containing pertinent information about the schools’ educational progress and performance. Every North Carolina public school, including charter schools and alternative schools, are required to disseminate the North Carolina School Report Card Snapshot to all parents after its annual release in the late fall. This report contains a variety of information to inform parents and community members about their local school and school system, including: school identification information, school size, school performance data, student performance data, school safety data, access to technology and instructional materials, and teacher quality data (Retrieved October 18, 2009, from <http://www.ncreportcards.org/src/faq.jsp>). A website housing all of this information and even additional data is maintained by the NCDPI. These reports were vital to the assimilation of the data for this dissertation because the school safety section contained the numbers of crime and violence incidents and suspensions and expulsions for each school in North Carolina, which was utilized to supplement the annual reports which sometimes just provided district-level data and not specific school-level data.

## Summary

The consideration and practice of public school uniforms in the United States has existed for over twenty years. Due to increased school violence and school shootings during this last decade, the numbers of schools and school districts that have implemented school uniform policies have increased. From Cherry Hill Elementary School in Baltimore, Maryland in 1987, to nearly fifty individual uniform cases by the fall of 1988, to an entire K-8 school district in Long Beach, California adopting a uniform policy in 1994, to President William J. Clinton supporting the use of school uniforms in 1996, and to a movement that has gained momentum in the rural counties and school districts of North Carolina, the trend to utilize school uniforms to address the safety and discipline concerns of schools and LEAs is a movement, which appears is here to stay, although not everyone agrees school uniforms have the potential to reduce school violence. The investigation of the perception studies, small-scale effectiveness studies, and the four large-scale effectiveness studies revealed much has been written on the topic of school uniforms and school safety, but the findings of these studies have proved inconclusive as both positive effects and no effects to school violence from school uniforms have been reported in all three categories. Brunσμα (2004) noted research on this topic of school uniforms and school safety is still void and incomplete and concluded more research is needed. This study represents an attempt to add to that knowledge base.

This chapter presented a review of the history of school uniforms and the literature on how school uniforms affect school safety. The next chapter will provide an



investigation into the methodological design of the present study, which attempts to compensate for some of the weaknesses of past school uniform studies.

## CHAPTER 3: METHODOLOGY

The purpose of this study was to explore the impact of school uniforms on safety in North Carolina high schools. It is well documented in the literature violence in both the United States and North Carolina public schools has sharply increased over the past ten years (Hill & Drolet, 1999; Massare, 2003; Shelton et al., 2009; Vairo et al., 2007). North Carolina has seen a 25% increase in the numbers of crime and violence incidents since 2003-2004 even though the numbers of North Carolina high schools requiring school uniforms have surged during this same time period. Since school crime and violence incidents in North Carolina result in a minimum of out-of-school suspension or expulsion, it seemed necessary to investigate both of these measures when examining school safety. The researcher concluded the need to investigate how the adoption of mandatory school uniforms by North Carolina high schools in the 2004-2005 through 2008-2009 school years may have affected the numbers of crime and violence incidents and the occurrences of suspensions and expulsions at these schools.

This chapter provides information regarding the statement of the problem, the research questions, the research design, the participants, data collection, limitations and assumptions, and data analysis. A summary of the main points from each section concludes the chapter.

### Statement of the Problem

With the steady increase of high schools in North Carolina requiring school uniforms during the 2004-2005 through 2008-2009 school years as a safety measure with no sound empirical basis for their usage as a school violence deterrent (Brunsmas,

2004), this study is needed to determine the impact of school uniforms in these North Carolina high schools on school safety.

As one strategy to decrease school violence, not everyone agrees school uniforms have the potential to reduce incidents of crime and violence and increase school safety (Massare, 2003; Samuels, 2003; Washington-Labat, 2003). From just a brief observation of the numbers presented on North Carolina high school violence incidents during this recent movement to school uniforms, it appears that the implementation of such policies in North Carolina high schools has resulted in few changes. The problem remains very little empirical investigation has actually been applied to the issue of school uniforms and school safety nationally (Brunsma, 2004), and in North Carolina particularly. With no known study to address whether the use of school uniforms by North Carolina high schools has resulted in any changes to the safety of these North Carolina high schools, the problem remains. Are school uniforms capable of improving school safety or not? This study will attempt to address this question by investigating whether the North Carolina high schools, which adopted school uniform policies during the 2004-2005 through 2008-2009 school years resulted in any changes to school safety.

#### Research Questions

Five research questions were considered for this study. They were:

1. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of reported incidents of crime and violent acts at these schools?

2. To what extent did the adoption of school uniforms policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the reported rates of crime and violence incidents per 1,000 students at these schools?
3. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina high school state rates of crime and violence incidents per 1,000 students for those same school years?
4. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of suspensions and expulsions at these schools?
5. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina High School state suspension and expulsion rates for those same school years?

### Research Design

This study incorporated a multiple-methods design utilizing both quantitative and qualitative data. Patton (2002) noted, “quantitative methods ... require the use of standardized measures so that the varying perspectives and experiences of people can be fit into a limited number of predetermined response categories to which numbers are assigned” (p. 14). Gall, Gall, and Borg (2005) added, “the primary characteristics of quantitative research are an epistemological belief in an objective reality, the analysis of reality into measureable variables, the study of samples that represent a defined

population, and a reliance on statistical methods to analyze data” (p. 123). Creswell (2007) wrote, “qualitative research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem” (p. 37). He added, “qualitative researchers ... [collect] data in a natural setting sensitive to the people and places under study, and [conduct] data analysis that is inductive and establishes patterns or themes” (p. 37). These two different approaches to research, founded from two different perspectives, are increasingly being combined in an attempt to increase methodological rigor by incorporating the strengths of both types of designs (Patton). Patton stated, “studies that use only one method are more vulnerable to errors linked to that particular method than studies that use multiple methods in which different types of data provide cross-data validity checks” (p. 248). Quoting Brewer and Hunter, Patton wrote, “using multiple methods allows inquiry into a research question with ‘an arsenal of methods that have non-overlapping weaknesses in addition to their complementary strengths’” (p. 248). Denzin (1978) wrote, “I now offer as a final methodological rule the principle that multiple methods should be used in every investigation” (p. 28).

### *Procedures*

The quantitative portion of this mixed methods design investigated several annual reports distributed by the North Carolina Department of Public Instruction (NCDPI) in an effort to explore the possible relationship between school uniform policies and incidents of crime and violence and occurrences of suspensions and expulsions in North Carolina high schools, including: the Annual Report on School Crime and Violence, the Annual Study on Suspensions and Expulsions, the Consolidated Data

Report, and the North Carolina School Report Card Data Report. Pre- and post-school uniform policy adoption data for incidents of school crime and violence and occurrences of suspensions and expulsions in North Carolina high schools that adopted school uniform policies in the 2004-2005 through 2008-2009 school years were examined for patterns and trends. The post-school uniform policy adoption data for these same high schools were also compared to the North Carolina state rates for incidents of crime and violence and occurrences of suspensions and expulsions to explore possible patterns.

### *Instrumentation*

The qualitative portion of this study was based on the responses to an eight-item researcher-developed Likert-type survey sent to all current North Carolina administrators working in the high schools that implemented school uniform policies in the 2004-2005 through 2008-2009 school years to evaluate their perceptions of how school uniforms were working in these schools. Each item was written in the format of “from my experience”, and respondents were forced to choose between strongly disagree, disagree, agree, or strongly agree. Survey item numbers one, two, six, and eight dealt with general areas of school safety, which are often highlighted as areas of observed improvements in the school uniform research. Survey item numbers three, four, five, and seven asked respondents to provide their perceptions of whether the school uniform policy had resulted in fewer crime and violent acts and suspensions and expulsions.

The survey was normed for use by North Carolina high school administrators, both assistant principals and principals, by piloting the instrument within one selected North Carolina school district. So as not to contaminate the data, the group selected to

pilot the survey was one of the North Carolina school districts that adopted school uniforms for the 2009-2010 school year. This group of high school principals and assistant principals offered their perceptions and criticisms of the wording and readability of the survey. The chair and methodologist of this researcher's dissertation committee also provided assistance with the development of the survey items.

### Participants

The participants of this study included all of the "traditional" North Carolina high schools that adopted school uniform policies during the 2004-2005 through 2008-2009 school years. Before the 2004-2005 school year, there was only one North Carolina LEA and its two high schools operating with mandated school uniforms. Over the next five years, a total of seventeen North Carolina LEAs adopted school uniforms in all of its high schools and two additional LEAs adopted the policies in select high schools in their districts. The renewed interest in school uniforms in one North Carolina high school in 2004-2005 quickly spread to include forty-one North Carolina high schools by the beginning of the 2008-2009 school year.

### *Quantitative Data and Cohorts*

In the effort to explore the relationship between school uniforms and the incidents of crime and violence and occurrences of suspensions and expulsions in North Carolina high schools, the schools were grouped into cohorts based on their year of policy adoption.

Group one - School uniform policy adopted in 2004-2005. Richmond County, one high school.

Group two - Policy adopted in 2005-2006. Martin County, four high schools and Northampton County, two high schools.

Group three - Policy adopted in 2006-2007. Anson County, one high school; Bertie County, one high school; Jones County, one high school; Kannapolis City, one high school; Pamlico County, one high school; Tyrell County, one high school; Guilford County, one (Dudley HS) of fifteen high schools in the county.

Group four - Policy adopted in 2007-2008. Beaufort County, three high schools; Hertford County, one high school; Guilford County, four more high schools (Andrew HS, High Point Central HS, Southern HS, & Southwest HS) and one high school at a specified grade level (Smith HS - 9<sup>th</sup> grade only).

Group five - Policy adopted in 2008-2009. Greene County, one high school; Hickory County, two high schools; Pitt County, six high schools; Warren County, one high school; Washington County, two high schools; Guilford County, two more high schools (Northeast HS & Ragsdale HS) and one high school at two specified grade levels (Smith - 9<sup>th</sup> & 10<sup>th</sup> grade); Craven County, one (West Craven) of three high schools in the county.

#### *North Carolina Regions and High School Uniform Policies*

The use of school uniforms in North Carolina high schools has spread rapidly since the 2004-2005 school year. By 2008-2009, nineteen of one hundred and fifteen North Carolina LEAs had high schools operating under such mandatory policies. Many of these school systems are located in one pocket of North Carolina, thirteen in the northeast-east quadrant, and border one another, but other school systems throughout North Carolina have adopted such policies. North Carolina is broken down into eight



geographic regions, and at least one LEA in seven of the regions has a high school operating under a school uniform policy. Many of the North Carolina LEAs with high schools under such policies are the smaller and more rural counties of the state. Guilford County, however, is one of the three largest school systems in North Carolina, is more suburban and urban, and has a 2000 census population of 421,048. Pitt County is another fairly large school system in North Carolina, with six high schools and a population of 133,798, and both Kannapolis City Schools and Hickory City Schools serve a more suburban-urban cliental. Even though many of the school systems in the state with high schools with school uniform policies are located close geographically, there is much diversity in ethnicity. The LEAs with such policies range from 77.74% white to 62.34% black, with two additional LEAs over 70% white and two other LEAs with just under 60% black (2000 census). The range for Hispanic population is nearly 8% in two LEAs to a low of .73% in another LEA (2000 census). Even though these policies have been adopted primarily in bordering counties of North Carolina, there is enough diversity in geography, ethnicity, and LEA size and population to make this study relevant to most of the school systems in the state.

#### *Qualitative Data and Participants*

The participants of the qualitative portion of this study are similar to the quantitative participants. The quantitative participants were the specific “traditional” North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years investigated as different cohorts in order to better observe trends or patterns, but the same strategy would most likely be unfeasible when dealing with the administrators of these schools. This is due to the fact North Carolina is

presently in the midst of a large retirement or turnover rate with its administrators and the principals and assistant principals working in the schools in the first or second cohorts are most likely no longer employed in that capacity. The researcher decided to focus on the current principals and assistant principals working in the thirty-eight North Carolina high schools that adopted school uniforms in the 2004-2005 through 2008-2009 school years. These individuals were the participants selected for the qualitative portion of this study.

### Data Collection

Since the study focused on determining whether mandatory school uniform policies adopted by North Carolina high schools in the 2004-2005 through 2008-2009 school years had any effect on incidents of crime and violence or the occurrences of suspensions and expulsions, it was necessary to determine which high schools in the state were utilizing such policies. The researcher was specifically interested in conducting a statewide study of the effectiveness of school uniforms on these variables since small-scale studies across the United States have produced inconclusive results. Multiple methods and sources were used to acquire the information on which high schools within North Carolina were operating with school uniform policies. The researcher contacted a public information officer (PIO) in one North Carolina school district to acquire a list of all North Carolina school districts and their PIOs. An email was sent to these individuals with a brief explanation of the study and three questions related to the use of school uniforms and when they were adopted, if used (see Appendix B). Weekly reminders were sent out to the PIOs who had not responded until a response was received. In cases where the information was not received from the

PIOs, the researcher called LEA district officials, called the individual high schools, or even visited district websites and individual school websites to view their handbooks and policy manuals to acquire the needed information. Once all the information was acquired, a Microsoft Excel spreadsheet was created containing a list of all North Carolina school districts, the number of high schools in each school district, the number or names of the high school in the district utilizing uniforms, and the year in which these high schools implemented the policy (see Appendix C). This information was utilized to form the five cohorts investigated in this study.

### *Quantitative Data Collection*

The majority of the quantitative data gathered for this investigation were obtained online through the NCDPI's website ([www.dpi.state.nc.us](http://www.dpi.state.nc.us)). This website contained the Annual Reports on School Crime and Violence, the Annual Studies of Suspensions and Expulsions, and the Consolidated Data Reports. For the quantitative portion of this study, the pre- and post-school uniform crime and violence data and the pre- and post-school uniform suspension and expulsion data were needed for the schools in the five cohorts. The researcher was able to download these reports, the 2003-2004, 2004-2005, 2005-2006, and 2006-2007 Annual Reports on School Crime and Violence, the 2003-2004, 2004-2005, 2005-2006, and 2006-2007 Annual Studies of Suspensions and Expulsions, and the 2007-2008 and 2008-2009 Consolidated Data Reports, from the NCDPI's website. Once these reports were downloaded and investigated, an inconsistency was uncovered between how the crime and violence data and the suspension and expulsion data were reported. For the school crime and violence data, incidents were reported at both the LEA and individual school level, but for the

suspension and expulsion data, incidents were only reported at the LEA level. With a focus on high schools in this study, the LEA data were insufficient to address the current research questions, so an alternative method to acquire the suspension and expulsion data was developed. As a current North Carolina administrator, this researcher was knowledgeable the state of North Carolina requires all of its schools to distribute an annual school report card highlighting the performance of each school in the areas of academic performance, teacher quality, and safe and caring schools. One of the reported measures in the safe and caring schools section of the North Carolina Report Card is the number of suspension and expulsions that occurred within the individual school. The data collected to generate this annual report is housed at [www.ncschoolreportcard.org/src/](http://www.ncschoolreportcard.org/src/). From this website, the researcher was able to acquire the school-level suspension and expulsion data for the five cohorts by downloading their individual school report cards for the needed school years.

#### *Qualitative Data Collection*

The qualitative data utilized in this study were derived from the responses to the survey administered to the current principals and assistant principals working in the North Carolina high schools that adopted mandatory school uniform policies in the 2004-2005 through 2008-2009 school years. The survey contained eight “forced choice” items in the form of a four-point Likert-type scale, one being strongly disagree, two being disagree, three being agree, and four being strongly agree, in an attempt to gauge this group of administrators’ perceptions of how the school uniform policy had affected general areas of school safety often credited to the use of school uniforms in the literature (items # 1, 2, 6, & 8) and crime and violent acts and suspensions and

expulsions (items # 3, 4, 5, & 7). The survey was administered on-line and emailed to these administrators with an attached introductory letter and brief summary of the purposes behind this investigation (see Appendix D). Email reminders and personal phone calls were utilized to generate responses to the on-line survey.

### Limitations and Assumptions

Brunsma (2002) acknowledged limitations often exist when dealing with school violence data from both the school level and the state level as inconsistencies can arise between what is reported and what is fact, hence criticizing school level officials for manipulating or hiding data. The collection of data for this study highlighted the opposite of this can also be true as the North Carolina annual reports were also inconsistent, vague, and shifting in the way the data were presented.

### *Limitations and Quantitative Data*

The data gathered from the NCDPI's website were inconsistent with both LEA and individual school-level data available for crime and violence incidents and only LEA-level data available for occurrences of suspensions and expulsions. This was not the limiting factor, as an alternative method of acquiring the school-level suspension and expulsion data was developed and utilized. The primary limitation for this project was with the data. The issue was the data were continually changing due to the fact more North Carolina high schools were adopting school uniform policies each year making it impossible to perform any statistical analyses. Comparing high schools with uniforms to high schools without uniforms in North Carolina over a certain length of time was not possible due to this issue, and the fact some schools would have to be included in the non-school uniform group for one or more years and then placed into the school uniform

group for other years. The sample size, high schools in North Carolina with school uniforms, was very small until just recently, three in 2004-2005 and nine in 2005-2006. Conducting a statistical analysis over a certain length of time for North Carolina high schools with uniforms compared to North Carolina high schools without uniforms utilizing one of the small samples described above would have yielded inconclusive or skewed results. An additional limitation when working with crime and violence and suspension and expulsion data was noted by Brunσμα (2006). He noted violent acts are difficult to assess due to the way schools vary on classifying these acts, as well as the effort put into finding or catching them. Regarding crime and violence data, Brunσμα (2006) stated, "records of expulsions, detentions, suspensions, and so on, are extremely volatile and susceptible to terminological tampering, reassigning offenses, and social desirability to present that which looks best" (p. 36). Because of these limitations, a statistical analysis was not possible and an alternative data analysis method was selected.

#### *Limitations and Qualitative Data*

Due to the current large retirement and/or turnover rate with North Carolina administrators and the time between the first and second cohorts' adoption of school uniforms and this study, it was most likely the principals and assistant principals working at these high schools when the school implemented school uniforms were no longer employed in that capacity. Attempting to track down the administrators working in these schools five and six years ago would have produced an arduous task. The researcher decided to focus on the current principals and assistant principals working in the thirty-eight North Carolina high schools that adopted school uniforms in the 2004-2005

through 2008-2009 school years. Because the participants are the current administrators at these North Carolina high schools and not the same principals and assistant principals that were at the schools when the adoption of school uniforms was made, it is possible they have no experience with the school before the move to school uniforms making it difficult to answer some of the survey items and creating the first limitation to the qualitative data. Since the adoption of school uniforms by the North Carolina high schools in the first and second cohorts was five to six years ago, it is also possible the current principals and assistant principals of these schools have no experience working at any schools without school uniforms making it difficult to answer the survey items.

#### *Assumptions and Quantitative Data*

Brunsma (2006) acknowledged violent acts are difficult to assess due to the way schools vary on classifying these acts, as well as the effort put into finding or catching them, and he further stated, “records of expulsions, detentions, suspensions, and so on, are extremely volatile and susceptible to terminological tampering, reassigning offenses, and social desirability to present that which looks best” (p. 36). Massare (2003) noted, the continuum between lesser discipline infractions and more serious offenses of school crime and violence is linked and often occurs on the same place. Determining whether an incident or act falls within one of the seventeen reportable North Carolina crime and violence acts or is of a less serious nature requires some human interpretation and is prone to possible error. As a result, two assumptions to this study and the quantitative data were made: (a) administrators at every North Carolina high school held and applied equal standards to the determination of whether an incident was one of the

seventeen reportable crime and violence offenses or a lesser infraction, and (b) administrators at every North Carolina high school reported every crime and violence incident and suspension and expulsion and made no effort to hide or tamper with the data.

### *Assumptions and Qualitative Data*

Due to the current large retirement and/or turnover rate with North Carolina administrators and the time between the first and second cohorts' adoption of school uniforms and this study, the researcher chose to survey the current administrators working at the North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years. It was possible the current administrators were not the principals and assistant principals at these schools when the move to school uniforms was made, and this resulted in the limiting factor of possibly having no experience with the school before the move to school uniforms. The assumption was made the administrators responding to these surveys had knowledge of the school before the move to school uniforms, or if they did not, they asked another more experienced faculty member of the school with knowledge of the school before the move to uniforms. As current principals and assistant principals working in the North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years, the researcher could be sure the respondent to the survey would have experience with students wearing school uniforms. The researcher could not guarantee the administrators of these schools had experience with students not wearing school uniforms, but since policies mandating this type of school clothing in North Carolina high schools is fairly new and rare the assumption was made.



## Data Analysis

### *Descriptive and Inferential Statistics*

Due to the above noted limitations with the sample and data available, the researcher was unable to utilize inferential statistics, but instead was forced to employ descriptive statistics and methods. Inferential statistics are used when a researcher utilizes a sample and the sample's data to make estimates or predictions about the population and its data (Rowntree, 1981). When the sample is biased or too small or when the sample's data are potentially faulty or damaged, inferential statistics and methods are not appropriate because the estimate or prediction of the population would be invalid and not statistically reliable (Rowntree). When dealing with small samples and data that are not statistically capable of being generalized to the population, descriptive statistics are often utilized. Gall et al. (2005) stated, "descriptive statistics serve a useful purpose by summarizing all the data in the form of a few simple numerical expressions, called statistics" (p. 155), and Rowntree noted, "descriptive statistics are methods used to summarize or describe our observations". With an emphasis on producing a reliable study, this researcher was forced to turn to descriptive statistics.

### *Quantitative Data Analysis*

For the quantitative data, the researcher investigated the annual reports from the NCDPI's website and data from the North Carolina School Report Card's website. Due to the noted limitations with the data, inferential statistics and mathematical analyses were not possible. To investigate the possible connection between school uniforms and school safety in North Carolina high schools quantitatively, descriptive data were utilized. The schools were assigned to one of the five cohorts based on their year of

school uniform policy adoption, and pre- and post-school uniform data for crime and violent incidents and suspensions and expulsions were compared to each LEA and cohort and to the North Carolina state rates for these same incidents for possible trends and patterns.

### *Qualitative Data Analysis*

Responses to the survey of current administrators working in the “traditional” North Carolina high schools where school uniforms policies have been implemented were analyzed using a frequency distribution. Each item in the on-line survey was summarized by response category for the Likert-type scale. The items were then coded and placed into one of the two categories (general areas of school safety and crime and violence/suspensions and expulsions) to determine possible patterns and trends.

### Summary

The use of school uniforms by North Carolina high schools was extremely rare until the 2004-2005 school year. One North Carolina LEA adopted school uniforms for its two high schools in the 2000-2001 school year, but other schools and LEAs across the state were slow to adopt similar policies. In the 2004-2005 school year, this began to change. Richmond County, another LEA in North Carolina, adopted uniforms for its high school and the interest in the idea was reborn. Since that year, at least one North Carolina LEA has adopted school uniforms each year, bringing the total to forty-five schools in twenty-one LEAs for the 2009-2010 school year. With additional high schools and LEAs across the state considering them for their future with no solid research on their effectiveness, the researcher developed a multiple-methods design to address whether mandatory school uniforms policies adopted by North Carolina high schools in

the 2004-2005 through 2008-2009 school years had resulted in any changes to school crime and violence incidents and/or occurrences of suspensions and expulsions. These years were selected because the 2004-2005 school year was the beginning of the renewed interest in school uniforms by North Carolina high schools, and the 2008-2009 school year was chosen because it was the last year of data that the researcher was able to acquire for this study. For the quantitative data, all “traditional” high schools in North Carolina that adopted mandatory school uniform policies in the 2004-2005 through 2008-2009 school years were placed into cohorts depending on the year of policy adoption, and pre- and post-school uniform data were compared to the other cohorts and to the North Carolina state rates for crime and violent incidents and occurrences of suspensions and expulsions for possible patterns and trends. For the qualitative data, the researcher developed an eight-item on-line survey that was distributed to current principals and assistant principals working in the North Carolina high schools where school uniforms policies were adopted in the 2004-2005 through 2008-2009 school years. The survey items were based on a Likert-type scale and fit into one of two categories: (a) general areas of school safety often noted in the school uniform research, or (b) incidents of crime and violence/occurrences of suspensions and expulsions. Responses to the survey were coded, grouped into the two categories, and investigated with a frequency distribution to determine possible trends and patterns.

In chapter 3, the methodological design and the research questions of this study were presented. Chapter 4 contains several charts and graphs to analyze the data gathered for this study and to highlight the findings of the research questions.

## CHAPTER 4: ANALYSIS OF DATA

The purpose of this study was to explore the impact of school uniforms on safety in North Carolina high schools. This study was specifically designed to investigate the incidents of crime and violence, the occurrences of suspensions and expulsions, and the perceptions of administrators in the North Carolina high schools that adopted school uniforms during the 2004-2005, 2005-2006, 2006-2007, 2007-2008, and 2008-2009 school years. This study sought to evaluate and conclude the responses to the following research questions:

1. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of reported incidents of crime and violent acts at these schools?
2. To what extent did the adoption of school uniforms policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the reported rates of crime and violence incidents per 1,000 students at these schools?
3. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina high school state rates of crime and violence incidents per 1,000 students for those same school years?
4. To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of suspensions and expulsions at these schools?

5. What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina High School state suspension and expulsion rates for those same school years?

Participants of this study included all of the “traditional” North Carolina high schools that adopted school uniform policies during the 2004-2005 through 2008-2009 school years. The researcher collected data from several North Carolina annual reports to determine the relationship between the high schools adopting school uniforms and their crime and violence incidents and suspensions and expulsions. The researcher also examined the responses to an eight-item, Likert-type on-line survey of current administrators, both principals and assistant principals, working in the North Carolina high schools that adopted school uniforms during the designated time period.

A total of thirty-eight high schools from twenty North Carolina LEAs comprised the population of this study. Each high school was categorized into one of five cohorts, based on the year of policy adoption, and labeled with a letter to assure anonymity, for example, Cohort 1A. The survey data were collected online and utilized no identifiers to assure confidentiality for all participants. The survey was developed in the fall of 2009 and distributed in March 2010. It was emailed to the 129 North Carolina administrators working in the thirty-eight high schools that adopted school uniforms in the 2004-2005 through 2008-2009 school years.

Due to several data limitations including sample size and fluctuating samples (schools that were non-uniform schools at the beginning of the study and then switched to school uniforms for the last year or two of the study), inferential statistical analyses

were not possible. The researcher developed his approach based on descriptive statistics founded on whether the adoption of school uniform policies by North Carolina High Schools resulted in consistent and sustainable differences in the numbers of crime and violence incidents and suspensions and expulsions in these schools.

This chapter presents the findings to the proposed research questions and highlights the responses to the online survey. Results are provided separately for research questions one through five, the data from the responses to the survey are then investigated, and the chapter concludes with a summary of all findings. The chapter summarizes the findings into tables, which are generated from the charts in appendices E, F, G, H, I, J, K, L, M, and N.

### Findings for Research Questions

#### *Findings for Research Question One*

The first research question was: To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of reported incidents of crime and violent acts at these schools?

The researcher examined the total number of crime and violence incidents occurring in the thirty-eight North Carolina high schools during the 2003-2004 through 2008-2009 school years to determine the findings to this question. These school years were selected in order to acquire both pre- and post-school uniform data for all thirty-eight schools included in this study. The schools were arranged in cohorts based on the year of policy adoption with cohort one adopting school uniforms in 2004-2005, cohort two adopting school uniforms in 2005-2006, cohort three adopting school uniforms in

2006-2007, cohort four adopting school uniforms in 2007-2008, and cohort five adopting school uniforms in 2008-2009. This arrangement of the schools resulted in the cohorts being comprised of the following data:

- a. Cohort one – one high school within one North Carolina LEA with one year of pre-uniform data and five years of post-uniform data;
- b. Cohort two – six high schools from two North Carolina LEAs with two years of pre-uniform data and four years of post-uniform data;
- c. Cohort three – seven high schools from seven North Carolina LEAs with three years of pre-uniform data and three years of post-uniform data;
- d. Cohort four – nine high schools from three North Carolina LEAs with four years of pre-uniform data and two years of post-uniform data; and
- e. Cohort five – fifteen high schools from seven North Carolina LEAs with five years of pre-uniform data and one year of post-uniform data.

Each cohort school was represented by six years of data. To determine the findings for question one, each school's data were collectively examined for consistent and sustainable change pre- and post-school uniforms. The researcher sought to determine if the implementation of school uniforms resulted in no change, positive change, or negative change for all thirty-eight schools. For cohorts two, three, and four, one year of no change, positive change, or negative change was not enough to distinguish the impact of school uniforms, but instead a consistent difference in the pattern between pre- and post-school uniform data was needed to make the determination. The determination of whether a school fit into the no change, positive change, or negative change was more difficult for cohort one and cohort five because

only one year of data was available for pre-school uniforms in cohort one and post-school uniforms for cohort five. For cohort one, the one year of pre-school uniform data was compared to the five years of post-school uniform data and for cohort five, the five years of pre-school uniform data were compared to the one year of post-school uniform data for a consistent change. The classification of no change, positive change, or negative change was then determined based on the one year of pre- or post-school uniform data in relation to the pattern of the other five years of data.

The numbers of cohort schools which experienced no change, positive change, or negative change to its incidents of crime and violence after the adoption of school uniforms is presented in Table 1. Table 1 is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which experienced no change, positive change, or negative change to its total crime and violence incidents from the adoption of school uniforms. The last row of Table 1 provides the total number of cohort school that fell within the three categories (no change, positive change, and negative change). An additional table that disaggregates the cohorts into the individual schools is provided in Appendix E.

The findings for question one appeared to result in no changes to the total number of crime and violence incidents occurring within the North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years. Table 1 displayed thirty-one of the thirty-eight cohort schools showed no consistent and sustainable change between the total numbers of crime and violent incidents pre- and post-school uniforms. Although one or more schools may have experienced one or two years of positive or negative change after the adoption of school uniforms, the



Table 1

*Number of Cohort Schools and Type of Change Experienced to Incidents of Crime and Violence Pre- and Post-school Uniforms*

	No Change	Positive Change	Negative Change
Cohort 1	1	0	0
Cohort 2	5	1	0
Cohort 3	6	0	1
Cohort 4	7	0	2
Cohort 5	12	3	0
Total	31	4	3

differences in total crime and violent incidents were not consistent from the years of pre-school uniform data. An example is cohort school 3F, which posted 5, 7, and 33 total incidents of crime and violence pre-school uniforms and 25, 16, and 7 incidents of post-school uniforms (see Appendix E). Even though cohort school 3F experienced three consecutive years of decline in total incidents of crime and violence after the implementation of school uniforms, the numbers of incidents, 25, 16, and 7, were not consistently different from the first two years of pre-school uniform total crime and violence incidents, 5 and 7, but only from the year prior to implementation.

Four North Carolina high schools, cohort schools 2C, 5A, 5C, and 5L, did seem to experience positive results from the adoption of school uniforms (see Appendix E). None of these schools were from the same district, and only one, 2C, was from one of the cohorts that had more than one year of post-school uniform data. School 2C experienced 7 and 11 incidents of crime and violence pre-school uniforms, but had only 2, 2, 4, and 2 incidents post-school uniforms. The other three schools that seemed to experience positive results from the implementation of school uniforms all came from cohort five and had only one year of post-uniform data. School 5A and school 5C fit the positive change category because of the changes in total crime and violence incidents post-school uniforms in comparison to the three previous pre-school uniform years. School 5A had experienced 26, 31, and 31 incidents in the three years prior to school uniforms and only 22 the year school uniforms were adopted, and school 5C had experienced 32, 30, and 52 incidents the three years prior to school uniforms and only 21 incidents the year of policy adoption. School 5L reported its lowest total of crime and violence incidents ever after the adoption of school uniforms. School 5L only had 5

incidents the year of policy adoption compared to 9, 13, 16, 24, and 17 before school uniforms.

Three of the thirty-eight North Carolina high schools seemed to demonstrate negative results from the adoption of school uniforms; schools 3E, 4C, and 4H, all from different North Carolina LEAs, and all from cohorts that had multiple years of both pre- and post-school uniform data (see Appendix E). School 3E had its three highest years of crime and violence incidents, 34, 24, and 44, after the implementation of school uniforms. Schools 4C and 4H both had its two highest years of crime and violence incidents after the implementation of school uniforms with school 4C reporting 20 and 18 incidents post school-uniforms and only 12, 5, 12, and 14 pre-uniforms, and school 4H experiencing 15 and 17 incidents post-uniforms and only 8, 11, 10, and 2 incidents pre-school uniforms.

The results from research question one presented an effect of no change to the total numbers of crime and violence incidents after the adoption of school uniforms. Thirty-one of the thirty-eight North Carolina high schools investigated showed no consistent and sustainable change after the implementation of school uniforms. Although a few schools appeared to exhibit positive or negative change, they were outnumbered by the schools experiencing no change to their numbers of crime and violence incidents.

#### *Findings for Research Question Two*

Research question two was: To what extent did the adoption of school uniforms policies by North Carolina high schools in the 2004-2005 through 2008-2009 school

years impact the reported rate of crime and violence incidents per 1,000 students at these schools?

Research question two relied on data released from the North Carolina Department of Public Instruction (NCDPI) that quantified each school's total crime and violence incidents into a ratio of incidents per 1,000 students. Although a school's total crime and violence incidents and its rate of crime and violence incidents per 1,000 students are related, the rate of crime and violence incidents per 1,000 students is likely the more appropriate variable to make comparisons in a time series design, on a year-by-year basis, or across schools and LEAs because it quantifies student enrollment and ensures it is fixed and non-fluctuating.

Pre- and post-school uniform rates of crime and violence incidents per 1,000 students for the North Carolina high schools that adopted mandatory school uniform policies during the 2004-2005 through 2008-2009 school years were investigated for consistent and sustainable change as outlined in the discussion from the findings of research question one.

The numbers of cohort schools which experienced no change, positive change, or negative change to its incidents of crime and violence after the adoption of school uniforms is presented in Table 2. Table 2 is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which experienced no change, positive change, or negative change to its total crime and violence incidents from the adoption of school uniforms. The last row of Table 2 provides the total number of cohort school that fell within the three categories (no

Table 2

*Number of Cohort Schools and Type of Change Experienced to Rates of Crime and Violence Incidents Pre- and Post-school Uniforms*

	No Change	Positive Change	Negative Change
Cohort 1	1	0	0
Cohort 2	4	1	1
Cohort 3	5	0	2
Cohort 4	7	0	2
Cohort 5	13	2	0
Total	30	3	5

change, positive change, and negative change). An additional table that disaggregates the cohorts into the individual schools is provided in Appendix F.

Tables 2 depicted there were no consistent changes to rates of crime and violence incidents per 1,000 students pre- and post-school uniforms for the majority of North Carolina high schools that adopted school uniform policies during the investigated time frame. Of the thirty-eight high schools examined, thirty of them experienced no sustainable changes to their rates of crime and violence incidents per 1,000 students. Although some schools saw either a slight positive change or negative change for one or more years after the implementation of school uniforms, examples 2E and 3F, the differences were not consistently different from the pre-school uniform data (see Appendix F). Cohort school 2E posted three-years of crime and violence incidents rates (5.348, 12.433, and 6.073) below the year prior to school uniform implementation (13.962), but post-uniform year four's rate (24.39) was nearly double the rate of any pre-uniform year (0.000 and 13.962), and the three years of declining rates were never as low as the initial pre-uniform year rate of 0.000. School 3F experienced three consecutive declining rates of crime and violence incidents after the implementation of school uniforms (40.850, 27.923, and 12.48), but these three years' rates were not as low as the first two pre-uniform years' rates (7.862 and 11.309), and were only lower than the 2005-2006 rate (52.298), the year prior to the implementation of the policy.

Three cohort schools seemed to experience a positive change in their crime and violence incidents rates per 1,000 students pre- and post-school uniforms, schools 2C, 5C, and 5L (see Appendix F). Both schools 2C and 5L posted their lowest rates of crime and violence incidents per 1,000 students after the adoption of school uniforms, with

school 2C posting four consecutive years of crime and violence incidents rates (5.683, 5.848, 12.195, and 6.47) below the pre-uniform years' rates (17.677 and 28.871).

School 5L only had one year of post-school uniform data, but that year's rate of crime and violence incidents per 1,000 students (3.90) was nearly three times as low as any of its pre-school uniform year rates (11.524, 12.276, 13.805, 19.967, and 13.655).

School 5C had a post-school uniform rate of crime and violence incidents per 1,000 students of 18.25. Although this rate was not quite as low as the first two pre-uniform year rates (13.474 and 13.850), it was much lower than the three years of crime and violence rates prior to the adoption of the policy (28.070, 24.876, and 42.242).

Five cohort schools, schools 2F, 3A, 3E, 4C, and 4H, all appeared to experience negative changes to their rates of crime and violence incidents per 1,000 students after the adoption of school uniforms (see Appendix F). Even though school 2F did post its lowest rate of crime and violence incidents two years after the adoption of school uniforms (5.747), its three highest rates were also reported after school uniforms (32.258, 32.110, and 45.11), with the 2008-2009 rate being nearly two times higher than any of the pre-school uniform year data (13.626 and 22.624). In the other four schools, the highest crime and violence incident rates per 1,000 students were all experienced after the adoption of school uniforms. None of these schools experienced even one year of decline in their rates of crime and violence incidents after school uniforms, but instead, all experienced increases in their incident rates after the move to school uniforms. School 3A had pre-uniform year rates of 4.352, 16.249, 16.143 and post-uniform year rates of 29.907, 28.272, and 18.40. School 3E posted pre-uniform year rates of 15.504, 8.091, and 16.977 compared to post-uniform year rates of 27.892,

19.672, and 34.84. School 4C reported pre-uniform year rates of 11.550, 4.873, 11.572, and 13.035 and post-uniform year rates of 19.120 and 17.77, and school 4H experienced pre-uniform year rates of 6.579, 9.228, 8.019, and 1.477 and post-uniform year rates of 11.119 and 12.19.

The results from research question two presented an effect of no change to the rates of crime and violence incidents after the adoption of school uniforms. Although some positive and negative effects were observed to the crime and violence incident rates per 1,000 students in a few of the cohort schools, thirty of the thirty-eight high schools investigated displayed no consistent and sustainable change to their crime and violence incidents rates pre- and post-school uniforms.

#### *Findings for Research Question Three*

Research question three asked: What patterns or trends were determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina high school state rate of crime and violence incidents per 1,000 students for those same school years?

The NCDPI releases both a total count of crime and violence incidents occurring on North Carolina schools' campuses each year and a quantified crime and violence variable, which represents the number of crime and violence incidents occurring on each North Carolina school's campus if that school had exactly 1,000 students (see discussion of research question two). The crime and violence incident rate per 1,000 students makes it possible to examine schools to other schools or schools to the North Carolina state rate of crime and violence because it quantifies student enrollment and generates a fixed, non-fluctuating variable.



The North Carolina high school state rate for crime and violence incidents per 1,000 students has remained relatively stable in the five years being investigated, steadily climbing, but only fluctuating between 14.90 in 2004-2005 and 15.70 in 2008-2009. This fact denotes the high school state rate for crime and violence incidents per 1,000 students actually slightly increased, .8 incidents per 1,000 students, during the research period.

To explore the trend between the cohort schools and the high school state rate, the researcher concluded the need to determine the numbers of high schools from each cohort that were above, below, or equal to the state rate after the implementation of school uniforms. The high schools' six years of collective data were not sufficient to conclude a response to the research question due to the slight variation in the high school state rate over the investigated time period. The researcher determined each cohort school's yearly rate of crime and violence incidents per 1,000 students post-school uniforms would have to be compared to the North Carolina high schools' yearly rate to examine the pattern. This resulted in the following:

- a. 2004-2005: Cohort one (one school). The crime and violence rate per 1,000 students at this school was compared to the North Carolina high school state rate for 2004-2005.
- b. 2005-2006: Cohort one (one school) and cohort two (six schools). The crime and violence rates per 1,000 students of these seven schools were compared to the North Carolina high school state rate for 2005-2006.
- c. 2006-2007: Cohort one (one school), cohort two (six schools), and cohort three (seven schools). The crime and violence rates per 1,000 students of

these fourteen schools were compared to the North Carolina high school state rate for 2006-2007.

- d. 2007-2008: Cohort one (one school), cohort two (six schools), cohort three (seven schools), and cohort four (nine schools). The crime and violence rates per 1,000 students of these twenty-three high schools were compared to the North Carolina high school state rate for 2007-2008.
- e. 2008-2009: Cohort one (one school), cohort two (six schools), cohort three (seven schools), cohort four (nine schools), and cohort five (fifteen schools). The crime and violence rates per 1,000 students of all thirty-eight high schools were compared to the North Carolina high school state rate for 2008-2009.

Yearly rates of crime and violence incidents per 1,000 students for the North Carolina high schools that adopted school uniform policies during the 2004-2005 through 2008-2009 school years were compared to the North Carolina high school state rates of crime and violence incidents per 1,000 students as highlighted above. The number of cohort schools with yearly rates of crime and violence incidents above, below, or equal to the state rate is contained in Table 3. Since none of the cohort schools' yearly rates of crime and violence were exactly equal to the state rates, this category was omitted and the yearly rates were placed into one of the remaining categories, above or below the state rate.

Table 3 is arranged in six columns with column one identifying the cohort and columns two-six denoting the number of schools from each cohort which had post-

Table 3

*Number of Cohort Schools Above and Below the North Carolina High School State Rate of Crime and Violence Incidents per 1,000 Students*

	04-05		05-06		06-07		07-08		08-09	
State Rate	14.90		15.08		15.57		15.57		15.70	
	Abv	Blw	Abv	Blw	Abv	Blw	Abv	Blw	Abv	Blw
Cohort 1	0	1	0	1	0	1	0	1	0	1
Cohort 2			1	5	0	6	2	4	2	4
Cohort 3					5	2	6	1	3	4
Cohort 4							4	5	5	4
Cohort 5									9	6
Total	0	1	1	6	5	9	12	11	19	19

school uniform rates of crime and violence incidents per 1,000 students above (Abv) or below (Blw) the North Carolina high school state rates. The last row of Table 3 provides the total number of cohort school that fell above or below the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in Appendix G.

The data from Table 3 does not reveal a noticeable pattern or trend when investigating the five years collectively. Utilizing this format, a total of eighty-three comparisons are made between the cohort schools and North Carolina state rates of crime and violence incidents per 1,000 students. The eighty-three comparisons can be broken down into forty-six cohort schools' crime and violence incidents rates per 1,000 students falling above the state rate and thirty-seven falling below the state rate, which reveals very little in regards to a pattern.

A pattern is more observable when the data are broken down into two segments, years 2004-2005, 2005-2006, and 2006-2007, and years 2007-2008 and 2008-2009. Table 4 contains the data for years 2004-2005, 2005-2006, and 2006-2007. It is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which had post-school uniform rates of crime and violence incidents per 1,000 students above (Abv) or below (Blw) the North Carolina high school state rates. The last row of Table 4 provides the total number of cohort school that fell above or below the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in Appendix H.

Table 4

*Number of Cohort Schools Above and Below the North Carolina High School State Rate of Crime and Violence Incidents per 1,000 Students for school years 2004-2005, 2005-2006, and 2006-2007*

	04-05		05-06		06-07	
State Rate	14.90		15.08		15.57	
	Abv	Blw	Abv	Blw	Abv	Blw
Cohort 1	0	1	0	1	0	1
Cohort 2			1	5	0	6
Cohort 3					5	2
Total	0	1	1	6	5	9

Data from Table 4 display an apparent positive pattern between the adoption of school uniforms of North Carolina high schools and their relation to the North Carolina state crime and violence incident rates per 1,000 students. North Carolina high schools adopting uniforms during this time period had lower crime and violence incident rates per 1,000 students than the North Carolina high school state rates; sixteen schools below the state rates and six above the state rates.

The data from the 2007-2008 and 2008-2009 school years indicate a different pattern. Table 5 contains the data for the 2007-2008 and 2008-2009 school years. It is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which had post-school uniform rates of crime and violence incidents per 1,000 students above (Abv) or below (Blw) the North Carolina high school state rates. The last row of Table 5 provides the total number of cohort school that fell above or below the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in Appendix I.

Table 5 denotes the numbers of high schools above and below the North Carolina state rate for crime and violence incidents were nearly equal, eleven below and twelve above in 2007-2008 and nineteen below and nineteen above in 2008-2009 for a total of 30 schools above and 31 school below the North Carolina state rates for these two school years.

The two patterns noted in the discussion of this research question are both observable and distinct, but the second pattern is likely a more accurate portrayal of the data because it involves a greater number of schools, districts and comparisons. In

Table 5

*Number of Cohort Schools Above and Below the North Carolina High School State Rate of Crime and Violence Incidents per 1,000 Students for school years 2007-2008 and 2008-2009*

	07-08		08-09	
State Rate	15.57		15.70	
	Abv	Blw	Abv	Blw
Cohort 1	0	1	0	1
Cohort 2	2	4	2	4
Cohort 3	6	1	3	4
Cohort 4	4	5	5	4
Cohort 5			9	6
Total	12	11	19	19

years 2004-2005, 2005-2006, and 2006-2007, only fourteen school from ten school district were included, but in 2007-2008 and 2008-2009, all thirty-eight schools and eighteen districts were investigated.

#### *Findings for Research Question Four*

Research question four was: To what extent did the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years impact the total number of suspensions and expulsions for these schools?

Research question four examined the thirty-eight North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years to determine the impact of school uniforms on total numbers of suspensions and expulsions. Each school's six years of pre- and post-school uniform data were investigated for consistent and sustainable change and categorized into one of three groups: no change, positive change, or negative change. No change represented no consistent changes in total numbers of suspensions and expulsions after the implementation of school uniforms, positive change reflected a reduction in the numbers of suspensions and expulsions after the adoption of school uniforms, and negative change reflected an increase in the numbers of suspensions and expulsions post-school uniforms. For cohorts two, three, and four, one year of no change, positive change, or negative change was not enough to distinguish the impact of school uniforms, but instead, a consistent and sustainable difference in the pattern between pre- and post-school uniform data was needed to make the determination. The determination of whether a school fit into the no change, positive change, or negative change was more difficult for cohort one and cohort five because only one year of data



was available for pre-school uniforms in cohort one and post-school uniforms for cohort five. For cohort one, the one year of pre-school uniform data was compared to the five years of post-school uniform data, and for cohort five, the five years of pre-school uniform data was compared to the one year of post-school uniform data for a consistent change. The classification of no change, positive change, or negative change was then determined based on the one year of pre- or post-school uniform data in relation to the pattern of the other five years of data.

An investigation of the yearly numbers of suspensions and expulsions for each North Carolina high school that adopted school uniforms during the 2004-2005 through 2008-2009 school years revealed expulsions are nearly non-existent in “traditional” North Carolina high schools regardless of whether or not the school had implemented school uniforms. In the thirty-eight high schools, only eight total expulsions from six schools were reported. As a result, only pre- and post-school uniform numbers of suspensions for the North Carolina high schools that adopted mandatory school uniform policies during the 2004-2005 through 2008-2009 school years were investigated for consistent and sustainable change. The numbers of cohort schools which experienced no change, positive change, or negative change to its total numbers of suspensions after the adoption of school uniforms in presented in Table 6.

Table 6 is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort that experienced no change, positive change, or negative change to its total numbers of suspensions from the adoption of school uniforms. The last row of Table 6 provides the total number of cohort school that fell within the three categories (no change, positive change, and

Table 6

*Number of Cohort Schools and Type of Change Experienced to Numbers of Suspensions Pre- and Post-school Uniforms*

	No Change	Positive Change	Negative Change
Cohort 1	0	1	0
Cohort 2	4	2	0
Cohort 3	5	1	1
Cohort 4	8	0	1
Cohort 5	13	2	0
Total	30	6	2

negative change). An additional table that disaggregates the cohorts into the individual schools is provided in Appendix J.

The results to research question four appear to result in no changes to the total numbers of suspensions after the inception of school uniforms. Table 6 depicts thirty of the thirty-eight North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years displayed no consistent change between their total numbers of suspensions, pre- and post-school uniforms. Although one or more schools may have experienced one or two years of positive or negative change after the adoption of school uniforms, the difference in total suspensions were not sustainable. One example is cohort school 2D, which posted 349 and 266 yearly suspensions pre-school uniforms, and 73, 143, 155, and 314 yearly suspensions post-school uniforms. School 2D did experience three consecutive years of total suspensions below its pre-uniform years' data, but the numbers of suspensions increased each year after the implementation of uniforms and actually climbed to 314 in 2008-2009, nearly 50 suspensions more than its final year of pre-school uniforms.

Six North Carolina high schools, cohort schools 1A, 2B, 2C, 3G, 5A, and 5N, did seem to experience positive results to their total numbers of suspensions from the adoption of school uniforms (see Appendix J). School 1A only had one year of pre-uniform suspension data (366) and had mixed results for the first two years after uniform implementation (355 and 371), but its total suspensions declined for the last three years (297, 232, and 173) and by 2008-2009 was over half the total (173) of its one year of pre-school uniform data (366). Schools 2B, 2C, and 3G all with multiple years of pre- and post-school uniform total suspension data reported fewer total

suspensions for all years after the adoption of school uniforms. School 2B had 74 and 57 suspensions pre-school uniforms and 53, 44, 28, and 42 post-school uniforms; 2C had 304 and 250 suspensions pre-school uniforms and 150, 240, 225, and 170 post-school uniforms; and school 3G had 155, 74, and 86 suspensions pre-school uniforms and 61, 73, and 56 post-school uniforms. Both schools 5A and 5N only had one year of post-school uniform suspension data, but that year's data were much lower than its five years of pre-school uniform data. After the implementation of school uniforms, school 5A had nearly a 50% reduction in total suspensions (532) from the previous four years (1064, 1249, 1039, and 1152), and school 5N also declined nearly 33% (44 total suspensions post-school uniforms compared to 63, 96, 61, 63, and 78 pre-school uniforms).

Two of the thirty-eight North Carolina high schools seemed to demonstrate negative results in regards to total suspensions after the adoption of school uniforms (see Appendix J). School 3B saw an increase of nearly 200 suspensions after the introduction of uniforms from the previous years' total (239 suspensions post-school uniforms compared to 40 pre-school uniforms), and has remained over 200 suspensions for the last three years. School 4H witnessed an increase of nearly 350 suspension after adopting school uniforms (430 suspensions post-school uniforms compared to 88 the year before implementation), and remained over 400 last school year (419), nearly 150+ suspensions more that its highest non-uniform year (283 in 2003-2004).

The results from research question four appear to display no changes to the total numbers of suspensions after the adoption of school uniforms. Thirty of the thirty-eight

high schools investigated displayed no sustainable change after the implementation of school uniforms. This result is consistent with the findings for research questions one and two. Results for expulsions could not be determined based upon the limited numbers received by students of traditional North Carolina high schools during the investigated time period.

#### *Findings for Research Question Five*

Research question five asked: What patterns or trends can be determined between the adoption of school uniform policies by North Carolina high schools in the 2004-2005 through 2008-2009 school years and the North Carolina high school state suspension and expulsion rates for those same school years? As noted in the discussion from question four, there have only been eight total expulsions in six years from the thirty-eight schools being investigated in this study. Due to the limited number of expulsions from these schools, only the North Carolina high school state suspension rates were examined to the thirty-eight high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years.

North Carolina does not release suspension rates per 1,000 students, but releases both short-term and long-term suspension rates per 100 students. Since this researcher did not distinguish between short-term and long-term suspensions for this study, these two numbers were combined (added together) to form one quantified variable. This variable represented the number of suspensions, both short-term and long-term, that would have occurred in the high schools being investigated if the schools contained exactly 100 students.

The North Carolina high school state suspension rates per 100 students have changed very little in the last five years, fluctuating between 37 and 35 suspensions per 100 students. Due to the fluctuations in the North Carolina high school state suspension rates per 100 students in the last five years and the very slight decrease (2.0 suspensions in five years), determining the impact of North Carolina high schools adopting school uniforms on this variable would have been difficult. As a result, the same method to determine the comparison of the cohort schools to the state rates in question three was adopted for question five.

Post-uniform yearly rates of suspensions per 100 students for the North Carolina high schools that adopted school uniform policies during the 2004-2005 through 2008-2009 school years were compared to the North Carolina high school state rate of suspensions per 100 students. The number of cohort schools with yearly rates of suspensions above, below, or equal to the state rate is contained in Table 7.

Table 7 is arranged in six columns with column one identifying the cohort and columns two-six denoting the number of schools from each cohort that had yearly post-school uniform rates of suspension per 100 students above (A), below (B), or equal (E) to the North Carolina high school state rate. The last row of Table 7 provides the total number of cohort schools that fell above, below, and equal to the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in appendix K.

Table 7 contains eighty-three comparisons of the cohort schools' yearly suspension rates to the North Carolina high school state rates. The cohort schools' yearly suspension rates are higher than the state rates in fifty-one of those

Table 7

*Number of Cohort Schools Above, Below, and Equal to the North Carolina High School*

*State Rate of Suspensions per 100 Students*

	04-05			05-06			06-07			07-08			08-09		
State Rate	37			35			36			35			35		
	A	B	E	A	B	E	A	B	E	A	B	E	A	B	E
Cohort 1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0
Cohort 2				4	2	0	4	2	0	4	2	0	5	1	0
Cohort 3							3	4	0	4	3	0	3	4	0
Cohort 4										6	3	0	6	3	0
Cohort 5													12	2	1
Totals	0	1	0	4	3	0	7	7	0	14	9	0	26	11	1

comparisons, lower in thirty-one, and equal to in one. From Table 7 and the five years of data investigated collectively, it would appear the trend is high schools in North Carolina that require school uniforms have more suspensions than high schools in North Carolina not requiring school uniforms. This trend is true, but is not an accurate portrayal of the data over the five-year time frame. The data must be broken down into two segments, years 2004-2005, 2005-2006, and 2006-2007 and years 2007-2008 and 2008-2009, to better reflect and understand this trend.

Table 8 contains the data for years 2004-2005, 2005-2006, and 2006-2007. It is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which had post-school uniform rates of crime and violence incidents per 1,000 students above (A), below (B), and equal (E) to the North Carolina high school state rates. The last row of Table 8 provides the total number of cohort school that fell above, below, and equal to the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in Appendix L.

In school years 2004-2005, 2005-2006, and 2006-2007 (cohorts 1-3), there were eleven cohort schools with yearly suspension rates above the high school state rates, eleven below, and zero equal. The trend of high school with uniforms in North Carolina having higher suspension rates than non-uniform high schools emerged in the 2007-2008 school year as can be seen with Table 9.

Table 9 contains the data for years 2007-2008 and 2008-2009. It is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from each cohort which had post-school uniform rates of crime and



Table 8

*Number of Cohort Schools Above, Below, and Equal to the North Carolina High School State Suspension Rate per 100 Students for school years 2004-2005, 2005-2006, and 2006-2007*

	04-05			05-06			06-07		
State HS Rate	37			35			36		
	A	B	E	A	B	E	A	B	E
Cohort 1	0	1	0	0	1	0	0	1	0
Cohort 2				4	2	0	4	2	0
Cohort 3							3	4	0
Totals	0	1	0	4	3	0	7	7	0

Table 9

*Number of Cohort Schools Above, Below, and Equal to the North Carolina High School*

*State Suspension Rate per 100 Students for school years 2007-2008 and 2008-2009*

State HS Rate	07-08			08-09		
	A	B	E	A	B	E
Cohort 1	0	1	0	0	1	0
Cohort 2	4	2	0	5	1	0
Cohort 3	4	3	0	3	4	0
Cohort 4	6	3	0	6	3	0
Cohort 5				12	2	1
Totals	14	9	0	26	11	1

violence incidents per 1,000 students above (A), below (B), and equal (E) to the North Carolina high school state rates. The last row of Table 9 provides the total number of cohort school that fell above, below, and equal to the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in appendix M.

In school years 2007-2008 and 2008-2009 (cohorts 4 and 5), there were forty cohort schools with yearly suspension rates above the high school state rate, twenty below, and one equal to. The trend of high schools with uniforms in North Carolina having higher suspension rates than non-uniform high schools is even clearer when the data from Table 9 is disaggregated one more level and only the North Carolina high schools that adopted school uniforms in 2008-2009 are examined. Table 10 contains the data for the 2008-2009 school year. It is arranged in four columns with column one identifying the cohort and columns two-four denoting the number of schools from cohort five which had post-school uniform rates of crime and violence incidents per 1,000 students above (A), below (B), and equal (E) to the North Carolina high school state rates. The last row of Table 10 provides the total number of cohort five schools that fell above, below, and equal to the state rate for each school year. An additional table that disaggregates the cohorts into the individual schools is provided in Appendix N.

Table 10 displays that twelve cohort schools had suspension rates higher than the state rate, compared to only two below, and one equal to.

The pattern North Carolina high schools with school uniforms have higher suspension rates per 100 students than the North Carolina state rate of suspensions is true, but did not emerge until 2007-2008 and became even more distinct in 2008-2009.

Table 10

*Number of Cohort Five Schools Above, Below, and Equal to the North Carolina High School State Suspension Rate per 100 Students for school year 2008-2009*

	08-09		
State HS Rate	35		
	A	B	E
Cohort 5	12	2	1
Totals	12	2	1

This pattern does not suggest school uniforms caused or increased the numbers of suspensions in cohorts four and five. Instead, it suggests the North Carolina high schools that adopted school uniforms in 2007-2008 and 2008-2009, especially in 2008-2009, may have already had higher suspension rates than the state average before the implementation of uniforms.

### Findings for Survey

The qualitative portion of this mixed methods study was an on-line, anonymous survey that was developed and distributed to the current principals and assistant principals of the thirty-eight North Carolina high schools, which adopted school uniforms during the 2004-2005 through 2008-2009 school years. The Likert-type survey contained the following eight items and asked the North Carolina administrators to respond to each item as strongly disagree, disagree, agree, or strongly agree (Appendix D):

1. From my experience, school uniforms have assisted faculty members in the recognition of outsiders or guest on the school campus.
2. From my experience, students wearing school uniforms have better classroom behavior.
3. From my experience, school uniforms assisted in reducing the number of disciplinary referrals at my school.
4. From my experience, school uniforms helped to decrease the number of short-term suspensions at my school.
5. From my experience, school uniforms helped to reduce the number of severe discipline incidents.

6. From my experience, school uniforms helped to restrict or remove gang attire.
7. From my experience, school uniforms assisted in reducing the number of incidents of crime and violence.
8. From my experience, school uniforms have helped to create a safer school environment.

Survey items were developed and aligned around two themes; general areas of safety and behavior which are often arguments for the use of school uniforms in the literature (items 1, 2, 6, & 8), and impact on crime and violent incidents, severe discipline incidents, and suspensions and expulsions (items 3, 4, 5, & 7).

The survey was constructed in March, 2010 via an East Carolina University Qualtrics account and emailed to the one hundred and twenty-nine principals and assistant principals comprising the participants of the study. A three-week window return was established, and a final count of eighty-three responses was received; representing a 64% return rate. The responses were tabulated, and graphs, charts, and statistical calculations were developed by the Qualtrics program (see Appendix O).

Table 11 presents the findings from the on-line survey. It is arranged in six columns with column one identifying the survey item, columns two-five denoting the administrators' responses to the item (strongly disagree, disagree, agree, or strongly agree), and column six giving the percent agreement, which represented the number of North Carolina administrators who either responded with agree or strongly agree for the item.

Table 11

*Results of Principal/Assistant Principal Survey on School Uniforms*

	Response Category				Percent Agreement
	Strongly Disagree	Disagree	Agree	Strongly Agree	
Recognition of Outsiders	N = 6 7%	N = 4 5%	N = 28 34%	N = 45 54%	N = 73 88%
Better Classroom Behavior	N = 4 5%	N = 21 25%	N = 40 48%	N = 18 22%	N = 58 70%
Reduction in Referrals	N = 7 9%	N = 24 29%	N = 44 54%	N = 7 9%	N = 51 62%
Reduction in Suspensions	N = 7 9%	N = 32 39%	N = 35 43%	N = 8 10%	N = 43 52%
Reduction in Severe Discipline incidents	N = 6 7%	N = 26 32%	N = 39 48%	N = 11 13%	N = 50 61%
Restrict Gang Attire	N = 2 2%	N = 10 12%	N = 29 35%	N = 42 51%	N = 71 87%
Reduction in Crime and Violence	N = 4 5%	N = 22 27%	N = 42 52%	N = 13 16%	N = 55 68%
Safer School Environment	N = 2 2%	N = 13 16%	N = 47 57%	N = 21 25%	N = 68 82%
Totals	N = 38 6%	N = 152 23%	N = 304 46%	N = 165 25%	N = 469 71%

Table 11 depicts the 659 responses to the eight survey items. There were 469 responses of agree or strongly agree (71%) to the survey items, compared to only 190 responses of disagree or strongly disagree. All eight items received 52% agreement or greater. Three of the survey items had at least 80% agreement. School uniforms have assisted faculty members in the recognition of outsiders received the most agreement (88%), and also received the most responses of strongly agree (45). School uniforms helped to restrict or remove gang attire received the second most agreement (86%), and the second most responses of strongly agree (42). The third survey item receiving greater than an 80% agreement was school uniforms have helped to create a safer school environment (82% agreement). The survey item receiving the least agreement was school uniforms helped to reduce the number of short-term suspensions (52%), with 43 agree or strongly agree responses and 39 disagree or strongly disagree responses.

Disaggregating the data into the two categories of questions revealed a pattern in the responses of the principals and assistant principals. Table 12 presented the findings to the general areas of safety and behavior survey items (items 1, 2, 6, & 8), and Table 13 provided the findings to the crime and violence, discipline, and suspension/expulsion survey items (items 3, 4, 5, & 7). Both tables are arranged in six columns with column one identifying the survey item, columns two-five denoting the administrators' responses to the item (strongly disagree, disagree, agree, or strongly agree), and column six giving the percent agreement, which represented the number of North Carolina administrators who either responded with agree or strongly agree for the item.



Table 12

*Results of Principal/Assistant Principal Survey on School Uniforms and their Impact on  
General Areas of Safety and Behavior*

	Response Category				Percent Agreement
	Strongly Disagree	Disagree	Agree	Strongly Agree	
Recognition of Outsiders	N = 6 7%	N = 4 5%	N = 28 34%	N = 45 54%	N = 73 88%
Better Classroom Behavior	N = 4 5%	N = 21 25%	N = 40 48%	N = 18 22%	N = 58 70%
Restrict Gang Attire	N = 2 2%	N = 10 12%	N = 29 35%	N = 42 51%	N = 71 86%
Safer School Environment	N = 2 2%	N = 13 16%	N = 47 57%	N = 21 25%	N = 68 82%
Totals	N = 14 4%	N = 48 15%	N = 144 43%	N = 126 38%	N = 270 81%

Table 12 provides the responses to the four survey items pertaining to general areas of safety and behavior. A total of 332 responses were received for these items, with 270 of the responses being agree or strongly agree (81%) compared to only 62 responses of disagree or strongly disagree (19%). Three of the four general areas of safety and behavior survey items received an 80% agreement or higher and none were lower than 70%. Table 13 depicts the findings for the survey items pertaining to crime and violence incidents and suspensions, and the data contained in Table 13 reveals a different pattern.

A total of 327 responses were received for the survey items regarding crime and violence and suspensions. Of the 327 responses, 199 were agree or strongly agree (61%) and 128 were disagree or strongly disagree (39%). None of the four crime and violence or suspension survey items received even a 70% agreement rate, and three of the items were 62% or lower.

The data in Table 12 and Table 13 are quite different. Table 12 depicts the survey items receiving the most agreement and the most responses of strongly agree were the four items regarding the impact of school uniforms on the general areas of safety and behavior. All four of these items received 70% agreement or higher from the responding administrators, with recognition of outsiders, restriction of gang attire, and safer school environment over 80%. 126 (38%) of the responses were strongly agree and only 48 (15%) of the responses were disagree. Table 13 displays the survey items receiving the least agreement were the four regarding the impact of school uniforms on discipline incidents, crime and violence and suspensions. None of these survey items even received a 70% agreement rate, and three of the four had percent agreement

Table 13

*Results of Principal/Assistant Principal Survey on School Uniforms and their Impact on Discipline Incidents, Crime and Violence, and Suspension*

	Response Category				Percent Agreement
	Strongly Disagree	Disagree	Agree	Strongly Agree	
Reduction in Referrals	N = 7 9%	N = 24 29%	N = 44 59%	N = 7 9%	N = 51 62%
Reduction in Suspensions	N = 7 9%	N = 32 39%	N = 35 43%	N = 8 10%	N = 43 52%
Reduction in Severe Discipline Incidents	N = 6 7%	N = 26 32%	N = 39 48%	N = 11 13%	N = 50 61%
Reduction in Crime and Violence	N = 4 5%	N = 22 27%	N = 42 52%	N = 13 16%	N = 55 68%
Totals	N = 24 7%	N = 104 32%	N = 160 49%	N = 39 12%	N = 199 61%

rates of 62% or lower. Out of the 327 responses, only 39 (12%) were strongly agree and 104 (32%) were disagree.

### Summary of Findings

This chapter presented the findings to the five research questions and highlighted the responses to the online survey. A total of thirty-eight high schools from twenty North Carolina LEAs comprised the population of this study. Each high school's crime and violence and suspension and expulsions data were examined, and an on-line survey was also developed and distributed to the 129 North Carolina administrators working in the thirty-eight high schools.

A pattern of no change pre- and post-school uniforms was observed for research questions one, two, and four. Thirty (research question one) or thirty-one cohort schools (research question two and four) showed no consistent and sustainable change pre- and post-school uniforms. Two observable patterns emerged in research questions three and five. For question three, the numbers of high schools falling above and below the state rate of crime and violence incidents began to level in 2007-2008, eliminating an earlier positive pattern between high schools with school uniforms. In question five, the numbers of high schools with uniforms above the state rate of suspensions was double the numbers below the state rate, but this pattern did not emerge into 2007-2008 and became even more distinct in 2008-2009.

Eighty-three of the one hundred and twenty-nine surveys were returned, and none of the eight survey items received an agreement percentage less than 52%. The four items that generated the highest responses of agreement were the ones pertaining to the general areas of safety (items 1, 2, 6, & 8), and the four items receiving the least

agreement were the ones specifically addressing crime and violence, discipline incidents, and suspensions (items 3, 4, 5, & 7). All four of the general safety survey items had a percent agreement percentage of 70% or higher, with three of the four items over 80%, and none of the crime and violence and discipline items received even a 70% agreement rate, and three of the four were 62% or lower.

The next chapter concludes the study. A summary of all findings is provided, conclusions are drawn, implications are presented, and recommendations for future research closes this study.

## CHAPTER 5: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

The purpose of this study was to explore the impact of school uniforms on safety in North Carolina high schools. This study was specifically designed to investigate the incidents of crime and violence, the occurrences of suspensions and expulsions, and the perceptions of administrators in the North Carolina high schools that adopted school uniforms during the 2004-2005 through 2008-2009 school years.

The data analysis indicated no change to the incidents of crime and violence and occurrences of suspensions for the majority of the thirty-eight high schools being examined in this study, although the school administrators working in these schools perceived school uniforms to positively impact school safety. The data for expulsions had to be omitted due to limited numbers.

This chapter concludes the study with the following sections: (a) conclusions, (b) implications for administrative practice, (c) recommendations for future study, and (d) a chapter summary.

### Conclusions

The overall finding suggested no change to crime and violence incidents and the numbers of suspensions in the North Carolina high schools that adopted school uniforms between the 2004-2005 through 2008-2009 school years. Even though a few schools did see a positive or negative change pre- and post-school uniforms in either crime and violence incidents and/or the numbers of suspensions, the majority of the thirty-eight North Carolina high schools produced no consistent or sustainable change for any of the data being examined.

Six previous studies, four small-scale and two large-scale, have examined crime and violence data and/or suspension and expulsion data in United States public high schools (Brunsmas & Rockquemore, 1998; Draa, 2005; Educational Testing Service, 2000; Samuels, 2003; Stevenson, 1999; Washington-Labat, 2003). The two large-scale studies (Brunsmas & Rockquemore; Educational Testing Service) actually contained very limited numbers of public high schools and the interpretation of their findings as being reliable and generalizable to other United States public high schools should be cautioned, however, both produced similar findings to this current study with Brunsmas and Rockquemore concluding school uniforms have no effect on student behavior, and the Educational Testing Service reporting no effect on student delinquency and numbers of violent incidents. The small-scale studies taken collectively produced mixed findings. Samuels concluded positive change to all levels of discipline incidents, and Washington-Labat experienced negative change in her study as a 40% increase in discipline referrals in the high schools was revealed. Draa and Stevenson reported mixed findings with Draa noting about half of the high schools reducing suspension and expulsion rates and about half remaining the same, and Stevenson concluding no significant decreases in the numbers of crime and violence incidents and suspensions and expulsions.

The finding current administrators working in the North Carolina high schools which implemented school uniforms in the 2004-2005 through 2008-2009 school years feel the adoption of school uniforms has improved the overall safety of their campuses is consistent with the majority of past research investigating perceptions of practicing administrators in regards to school uniforms. Five previous studies have investigated

practicing school administrators' perceptions of school uniforms, safety, and incidents of crime and violence, with four concluding positive perceptions (DeMitchell et al., 2000; NAESP, 2000; Stanley, 1996; Wilson, 1999) and one concluding negative perceptions (Brunsma, 2004). DeMitchell et al. through a random selection of 240 principals from a national database found most believed school uniforms reduced peer sexual harassment, and NAESP reported that 62% of 755 nationally telephoned school administrators felt school uniforms could improve the safety of their schools. Two other perception studies, Stanley and Wilson, produced more prominent findings in regards to school administrators and their perception of uniforms and safety. In her large-scale study of the Long Beach Unified School District, Stanley reported 100% (65 of 65) of principals felt school uniforms assisted in providing a safer school environment, and in his study of 141 school administrators, Wilson reported principals from schools with uniforms perceived their schools safer than principals from schools without uniforms at the  $p < .01$  level. Brunsma (2004) utilized two national database sets of principals and a perception survey to conclude, "school uniforms have a significant negative effect on principals' perceptions of the safety climate in their schools" (pp. 109-110).

In conclusion, this study revealed somewhat of a discrepancy between the crime and violence and suspension data and the perceptions of current administrators working in the schools which adopted uniforms in the 2004-2005 through 2008-2009 school years. This finding is in direct comparison to the findings of Behling (1994) and Hinchion-Mancini (1997). Behling concluded the effects of school uniforms are produced by a "halo effect" where school officials perceive them to result in changes



even though little to no change really occurs, and Hinchion-Mancini stated, “the benefits of uniforms are more perceptual than real” (p. 63).

#### Implications for Administrative Practice

In his 2006 book, *Uniforms in public schools: A decade of research and debate*, David Brunsma wrote,

there is absolutely nothing simplistic and straightforward about the current movement to uniform public school students in the United States. The debate over whether or not to uniform the students in our public schools ... is highly controversial, undeniably complex, and ... unquestionably rooted deeply in correspondingly multifaceted social, political, legal, cultural, racial, material, and educational structures” (p. xxi).

The question of whether this statement is factual is up to interpretation, but at minimum, there are several issues that must be considered as educational administrators investigate the implementation of school uniforms. Educational administrators exploring the implementation of a mandatory school uniform policy should determine their intended results and investigate those results against the research. With the research available, it is possible to make informed decisions regarding school uniforms and maybe even avoid the controversy, which often surround implementation of such policies.

For the educational administrator seeking to reduce crime and violence incidents and/or suspensions in high schools, the findings from this study and much of the literature do not support the use of school uniforms as a means of accomplishing this goal. Some positive change to incidents of crime and violence and numbers of

suspensions did occur in a few of the North Carolina high schools which implemented school uniforms, but the change was either unsubstantial and/or inconsistent and was outweighed by the data showing no effect. For all research questions comparing pre- and post-school uniform data, 30 or 31 of 38 high schools revealed no positive impact from the adoption of such policies. The data comparing uniform high schools to the North Carolina state rates of crime and violence and suspensions were also not positive. The finding of no effect to incidents of crime and violence and numbers of suspensions supports the large-scale, national database studies of Brunσμα and Rockquemore (1998) and the Educational Testing Service (2000), the small-scale findings of Washington-Labat (2003) and Stevenson (1999), and the following quote: “[school] uniforms have not been effective at attacking the very outcomes and issues they were assumed to aid” (Brunσμα, 2004, p. 169).

For the educational administrator seeking to improve the climate and overall feelings of safety in a school or school district, the findings from this study and most of the perception studies support the use of school uniforms. Survey item eight of this study, which specifically asked the administrators if school uniforms helped to create a safer school environment, received an 82% agreement and the fewest responses (2) of strongly disagree. Of the eight survey items utilized in this research, the four receiving the most agreement corresponded to general areas of school safety, 270 out of 332 responses (81%), with 38% of those responses being strongly agree. The finding school uniforms can assist administrators in improving the overall feelings of safety in their school is supported by the perception studies of Fosseen (2002), Jones (1997), Murray (1996), Tucker (2006), and Wilson (1999), the small-scale study of Bollinger (2002), and

the large-scale study of Stanley (1996), who showed 100% of administrators, 85.6% of school counselors, and 66.1% of classroom teachers felt school uniforms assisted in providing a safer school environment.

The adoption of school uniforms may be viewed as an intrusive measure to improve the safety of public schooling in the United States (Brunsma, 2006). Educational administrators will often need to be well versed on the research to defend their stance on the use of school uniforms. The results from this study do not support the use of school uniforms to decrease crime and violence incidents or suspension rates in high schools, but this study does suggest the use of school uniforms can lead to improvements in the overall climate and feelings of safety in high schools.

#### Recommendations for Future Research

King (1998) and Paliokas et al. (1996) suggest the following three strategies to produce empirical results of school uniforms and their effectiveness to produce change: (a) utilize trend analysis to conclude whether the changes produced in the school and/or district continue over time; (b) utilize an experiment and control group to compare changes in uniform schools versus non-uniform schools; and (c) utilize control variables to separate coincidental findings from true, accurate cause and effect findings. The recommendations for future research are based on these suggestions as well as the methodological limitations of this current study.

Future research should be conducted in public North Carolina high schools:

Incorporating a longitudinal, mixed-methods design, including trend analysis of all data (pre- and post-uniforms) for at least five school years. This would assist in

investigating any long-term changes in safety climate and crime and violence and suspension data for North Carolina high schools operating with school uniforms.

utilizing an experimental design where public non-uniform high schools are the control group and public uniform high schools are the experimental group. This would assist in collecting inferential statistics to determine if the adoption of school uniforms produced any statistically significant results to incidents of crime and violence or occurrences of suspensions.

between uniform and non-uniform schools with the crime and violence incidents broken down into the seventeen reportable offenses to determine possible differences. Although no change to total incidents of crime and violence was revealed through this study, it is possible certain offenses are impacted from the adoption of school uniforms. By breaking down the incidents into the 17 reportable offenses, it is possible to conclude the impact of school uniforms on each crime and violence incident, and not just the collective total.

between uniform and non-uniform schools where the crime and violence incidents and suspensions are disaggregated for age, gender, race, and socioeconomic status. This data would provide more comprehensive analysis and possibly prove useful in determining schools that would better benefit from a move to school uniforms.

comparing incidents of crime and violence and numbers of suspensions between high schools requiring dress codes and high schools mandating school uniforms.

This data would allow an investigation into whether dress codes, school uniforms, or neither impact incidents of crime and violence and occurrences of suspensions in North Carolina high schools.

in other areas including: school climate, classroom climate, attendance, and peer relationships. This analysis could provide more information on the impact of school uniforms on North Carolina high schools.

Future school uniform research should:

incorporate the methodological design of the study in all North Carolina public schools with adopted school uniform policies to determine if the results of this study are specific to the high school level.

develop strict methodological designs utilizing stringent measures and control variables to eliminate any rival alternative explanations. Schools investigated need to be carefully chosen and be similar in terms of organization, demographics, location, age, and physical condition.

investigate schools that have administrative longevity and ensure that the changes seen in crime and violence incidents and numbers of suspension is not due to a change in leadership style, but in terms of the use or non-use of school uniforms.

schools that have opted out of school uniforms and determine the effects on crime and violence incidents and number of suspensions for schools that have chosen to eliminate their use of school uniforms.

## Chapter Summary

The results from this study were used to examine the impact of school uniforms on school safety in North Carolina high schools. This study specifically examined whether the adoption of mandatory school uniforms by North Carolina High Schools in the 2004-2005 through 2008-2009 school years resulted in any changes to the numbers of crime and violence incidents and/or suspensions and expulsions of these schools. The results of expulsions had to be omitted due to the limited numbers that have occurred in “traditional” North Carolina high schools during this time period. This study concluded no change pre- and post-school uniforms for incidents of crime and violence and numbers of suspensions, although the survey responses of current administrators working in these schools suggested school uniforms have assisted in improving the overall safety of their schools.

A large portion of the literature supports the apparent rival findings of this study. Several perception studies have concluded feelings of safety are enhanced in schools requiring school uniforms, but often when the data are investigated for crime and violence incidents or numbers of suspensions this finding is not supported. It would appear educational administrators seeking to improve the safety climate of their schools could elect to investigate and implement the adoption of school uniforms, but if change to incidents of crime and violence and/or numbers of suspensions is the objective a move to school uniforms may not be the best strategy.

## REFERENCES

- Anderson, W. (2002). School dress codes and uniform policies. *ERIC Policy Report No. 4*. Retrieved September 28, 2007, from [http://eric.uoregon.edu/publications/policy\\_reports/dress?codes/intro.html](http://eric.uoregon.edu/publications/policy_reports/dress?codes/intro.html)
- Baker, J., & Michael, R. (1987, November 30). Dressing to be successful. *Newsweek*, 110, 62.
- Barton, P., Coley, R., & Wenglensky, H. (1998). The links among school discipline, student delinquency, and academic achievement. In P. Barton and H. Wenglensky (Eds.), *Order in the classroom: Violence, discipline and student achievement* (pp. 7-9). Princeton, NJ: Educational Testing Service Policy Information Center.
- Bedard, P. (1996, March 25). All uniformly in agreement. *Insight on the News*, 37.
- Behling, D. (1994). School uniforms and person perception. *Perceptual and Motor Skills*, 79(2), 723-729.
- Black, S. (1998). Forever plaid? *American School Board Journal*, 185(11), 42-45.
- Blount, J. M. (1996, November). Will a change of dress ensure success? *About ... Time*, 24(11), 4.
- Bollinger, L. S. (2002). *The effects of a mandatory school uniform policy on school climate and student discipline in an urban middle school*. Unpublished dissertation, University of Houston.
- Brunsma, D. L. (2002). *School Uniforms: A critical review of the literature*. Monograph For Phi Delta Kappan's From Inquire to Practice series.

- Brunsma, D. L. (2004). *The school uniform movement and what it tells us about American education: A symbolic crusade*. Lanham, MD: Scarecrow Education.
- Brunsma, D. L. (2006). *Uniforms in public schools: A decade of research and debate*. Lanham, MD: Rowman & Littlefield Education
- Brunsma, D. L., & Rockquomore, K. A. (1998). Effects of student uniforms on attendance, behavior problems, substance use, and academic achievement. *Journal of Educational Research, 92*, 53-62.
- Buckley Jr., W. F. (1996, February 26). School uniforms? *National Review, 71*.
- California Education Code (1994, August 23). Chapter 325, sec. 35183, subsection (a), 1-3.
- Caruso, P. (1996). Individuality vs. conformity: The issue behind school uniforms. *National Association of Secondary School Principals Bulletin, 80*(58), 83-88.
- Chaika, G. (1999). School uniforms: Panacea or band-aid? *Education World On- line*. Retrieved on November 18, 2008, from <http://www.education-world.com>
- Clinton, W. J. (1996). State of the Union Address to Congress.
- Comer, J. (1988). Educating poor minority children. *Scientific American, 259*(5), 2-8.
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. (2<sup>nd</sup> ed.) Thousand Oaks, CA: Sage Publications.
- Curry, J. (1988, October 16). Uniforms earning high marks at public schools. *New York Times, 10*.
- DaCosta, P., & College, U. (2006). Dress code blues: An exploration of urban students' reactions to a public high school uniform policy. *The Journal of Negro Education, 75*(1), 49-59.



- Davidson, A., & Rae, J. (1990). *Blazers, badges, and boaters: A pictorial history of the school uniform*. Horndean: Scope International.
- DeLong, M., Kim, Y., & Koh, A. (2002, December). Perspectives on wearing school uniforms in Korea. *International Journal of Costume, 2*, 53-71.
- DeMitchell, T. A., Fossey, R., & Cobb, C. (2000). Dress codes in the public schools: Principals, policies, and precepts. *Journal of Law and Education, 29*(1), 31-50.
- Denzin, N. K. (1978). *The research act: A theoretical introduction to sociological methods* (2<sup>nd</sup> ed.) Thousand Oaks, CA: Sage Publications.
- Draa, V. A. B. (2005). *School uniforms in urban public high schools*. Unpublished Dissertation. Youngstown State University.
- Educational Testing Service. (2000). *Order in the classroom: The Links among school discipline, student delinquency, and academic achievement*. Retrieved November 18, 2008, from <http://www.aypf.org/forumbriefs/1999/fb032699.htm>
- Fosseen, F. F. A. (2002). *School uniforms and sense of school as a community: Perceptions of belonging, safety, and caring relationships in urban school settings*. Unpublished dissertation, University of Houston.
- Gall, J. P., Gall, M. D., & Borg, W. R. (2005). *Applying educational research: A practical guide*. (5<sup>th</sup> ed.) Boston: Pearson Education.
- Grant Feda, D. M. (2008). *Written violence policies and assault deterrents in Minnesota Schools: Impact on educators' risk of physical assault*. Unpublished dissertation, The University of Minnesota.

- Gullatt, D. E. (1999). Rationales and strategies for amending the school dress code to accommodate student uniforms. *American Secondary Education*, 27(4), 39.
- Herman, V. (1998, September). School dress restrictions still block innovations and individual taste. *The Houston Chronicle*, 1912.
- Hill, S., & Drolet, J. C. (1999). School-related violence among high school students in the United States, 1993-1995. *Journal of School Health*, 69(7), 264-272.
- Hinchion-Mancini, G. (1997). School uniforms: Dress for success or conformity? *The Education Digest*, 63(4), 62.
- Hoeffler-Riddick, P.Y. (1999). *The relationship between the implementation of a mandatory uniform dress policy and attendance, discipline, grade point average and self-esteem*. Unpublished dissertation, Virginia Polytechnic University.
- Jones, C. D. (1997). *Staff members' perceptions of middle school culture in middle schools that have implemented school uniform policies*. Unpublished dissertations, Pepperdine University.
- King, K. (1998). Should school uniforms be mandated in elementary schools? *Journal of School Health*, 68(1), 32.
- Lewis, N. A. (1988, October 8). Uniforms: Schools like idea. *New York Times*, A31.
- MacDonald, D. R. (2000). Know the code. Twelfth grade—principles of American democracy lesson. Retrieved September 28, 2007, from ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. ED475439)
- Manual on School Uniforms*. (1996). Washington, DC: US Department of Education.

- Marsh, S. C., & Evans, W. P. (2007). Carrying a weapon to school: The influence of youth assets at home and school. *Journal of School Violence, 6*(4), 131-147.
- Massare, J. A. (2003). *Staff and parent perceptions regarding the effects of mandatory school uniforms on elementary and middle school students in a New Jersey school districts*. Unpublished dissertation, Wilmington College.
- McCarty, J. M. (1999). *The effects of school uniforms on student behavior and perceptions in an urban middle school*. Unpublished dissertation, Old Dominion University.
- Melvin, T. (1994, August 7). Blackboard: Uniform diversity in California. *New York Times, A7*.
- Murray, R. K. (1996). *Effects of school uniforms on student perceptions of school climate and student behavior*. Unpublished dissertation, South Carolina State University.
- Murphy, M. L. (1997). Public school uniforms: A case study of one school's experience. *Dissertation Abstracts, 58*(12-A), 4561.
- Myers, M. S. (1963, November 19). Why uniforms? *America, 109*, 630-632.
- NAESP. (2000). *Backgrounder on Public School Uniforms*. Retrieved November 18, 2008, from <http://www.naesp.org/ContentLoad.do?contentId=929>
- National Commission on Excellence in Education. (1983). *A Nation at risk: The imperative for educational reform*. Washington, DC: U.S. Department of Education.
- New Haven School to require uniforms. (1988, September 8). *New York Times, C8*.

- North Carolina Department of Public Instruction. (2002). *2001-2002 Annual report on school crime and violence*. Retrieved October 18, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/schoolviolence/2001-02schoolviolence.pdf>
- North Carolina Department of Public Instruction. (2008). *2007-2008 Consolidated data report: Report to the joint legislative education oversight committee*. Retrieved March 4, 2009, from <http://www.ncpublicschools.org/docs/research/discipline/reports/consolidated/2007-08.pdf>
- Paliokas, K. L., Futrell, M. H., & Rist, R. (1996). Trying uniforms on for size. *The American School Board Journal*, 183(5), 32-35.
- Pate, S. S. (1998). *The influence of mandatory school uniform policy in two Florida school districts*. Unpublished dissertation, Florida State University.
- Patton, M. Q. (2002). *Qualitative research & evaluation methods*. (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Portner, J. (1998, January 21). California district points to uniforms for plunging crime rate. *Education Week*, 17.
- Posner, M. (1996). Perception versus reality: School uniforms and the "Halo Effect". *The Harvard Education Letter*, 12(3), 1.
- Presidential Radio Address—Clinton's Memorial Day Address. (1988, June 1). *Weekly Compilation of Presidential Documents*, 34(22), 957.
- Remarks prior to a roundtable discussion on school uniforms in Long Beach, CA. (1996, March 4). *Weekly Compilation of Presidential Documents*, 368.

- Richburg, K., & Cooke, J. (1980, October 17). Barry favors uniform school clothing. *Washington Post*, A1.
- Rowntree, D. (1981). *Statistics without tears: A primer for non-mathematicians*. New York: Allyn and Bacon.
- Ryan, R., & Ryan, T. E. (1998). School uniforms: Esprit de Corps. *School Community Journal*, 8(2), 81-84.
- Samuels, K. S. (2003). *The relationship of school uniforms to students' achievement, attendance, discipline referrals and perceptions: An analysis of one urban school district*. Unpublished dissertation, University of Alabama, Birmingham.
- Saslow, L. (1998, December 6). Glen Cove weighs uniforms for its schools. *New York Times*, B4.
- Scherer, M. (1992). School snapshot: Focus on African-American culture. *Educational Leadership*, 49(4), 17-19.
- Shelton, A. J., Owens, E. W., & Song, H. (2009). An examination of public school safety measures across geographic settings. *Journal of School Health*, 79(1), 24-29.
- Sommers, N. L. (2001). The effects of dress on school discipline. Retrieved September 28, 2007, from EBSCOhost database.
- Stanley, M. S. (1996). School uniforms and safety. *Education and Urban Society*, 28(4), 424-435.
- Starr, J. (2000). School violence and its effect on the constitutionality of a public school uniform policies. *Journal of Law & Education*, 29, 113-118.

- State of the Union. (1996). *Washington Post Online*. Retrieved November 18, 2008, from <http://www.washingtonpost.com/wp/srv/politics/special/states/docs/sou96.htm>
- Sterngold, J. (2000, June 28). Taking a new look at uniforms and their impact on schools. *New York Times*, B11.
- Stevenson, H. L. (1999). *An analysis of requiring school uniforms and its impact on student behavior: Implications for school reform*. Unpublished dissertation, Texas Southern University.
- Thompson, M. H. W. (1999). Issues forum: Revisiting school uniforms. *The Educational Forum*, 63(4), 300.
- Tucker, III, W. H. (2006). Student uniforms and school climate: The urban middle school teacher's perception. In D. Brunsma (Ed.), *Uniforms in public schools: A decade of research and debate*. Lanham, Maryland: Rowman & Littlefield Education.
- Vairo, P. D., Marcus, S., & Weiner, M. (2007). *Hot-button issues for teachers: What every educator needs to know about leadership, testing, textbooks, vouchers, and more*. Lanham, Maryland: Rowman & Littlefield Education.
- Virginia State Department of Education. (1992). *Model guidelines for the wearing of uniforms in public schools*. (Report of the Department of Education to the Governor and the General Assembly of Virginia. House Document No. 27.) Richmond. (ERIC Document Reproduction Service No. ED 348 760)
- Volokh, A., & Snell, L. (1998). *School violence prevention: Strategies to keep schools safe*. Policy Study No. 234. Retrieved November 18, 2008, from <http://www.rppi.org/education/ps234.html>

- Washington-Labat, C. A. (2003). *The effects of school uniforms on attendance and discipline among schools with and without mandatory school uniform policies*. Unpublished dissertation, The University of Southern Mississippi.
- West, C., Tidwell, D. K., Bomba, A. K., & Elmore, P. A. (1999). Attitudes of parents about school uniforms. *Journal of Family and Consumer Science*, 91(2), 92.
- What's wrong with public school uniforms. (1988, October 24). *New York Times*, p. A16.
- White, K. A. (2000). Do school uniforms fit? *The School Administrator*, 57, 36-41.
- Wilkins, J. (1999, March). School uniforms: Not clear that school uniforms will reduce violence. *The Humanist*, 19.
- Williams, V. Z. W. (2003). *The impact of school uniforms on student attendance, student discipline, and student achievement*. Unpublished dissertation, The University of Southern Mississippi.
- Williams-Davidson, C. M. (1996). Case study of the mandatory enforcement of a voluntary student uniform policy. *Dissertation Abstracts*, 57(10-A), 4199.
- Wilson, R. E. (1999). *Perceptions of school administrators regarding variables that impact violence in urban schools districts and implications for school counselors*. Unpublished dissertation, Texas Southern University.
- Zernike, K. (2002, September 13). Plaid' out, again, as schools give up requiring uniforms. *New York Times*, A1.

## APPENDIX A: NORTH CAROLINA CRIME AND VIOLENCE

### INCIDENTS AND DEFINITIONS

A list and definition of the seventeen North Carolina crime and violence offenses as required and defined in North Carolina General Statute 115C-288(g): (Retrieved February 26, 2010, from <http://www.ncpublicschools.org/research/discipline/offenses/>)

- 1) assault resulting in serious injury: An intentional physical attack causing the victim obvious severe or aggravated bodily injury involving (a) broken bones, loss of teeth, possible internal injuries; severe lacerations and bleeding; or loss of consciousness; and/or (b) requiring emergency medical services by trained school personnel or other health professionals (e.g. EMS) and/or hospitalization. If the offender used a weapon in an assault resulting in serious injury, report both assault resulting in serious injury and assault involving use of a weapon. Fights or affrays, where no weapon was used, resulting in no apparent or serious injuries are not required by state law to be reported, even if the incident resulted in suspensions or expulsion for the student. Local school board policy may require reporting of fights or affrays to law enforcement.
- 2) assault involving the use of a weapon: An assault by one person against another where the attacker either uses a weapon or displays a weapon in a threatening manner. Weapon is defined as: Any firearm or explosive device; force-impacting device; knife or sharp-edged or sharp-pointed utensil, device or tool; or any article, instrument or substance which can or is likely to produce death or great bodily harm. If a firearm or other weapon is used in the commission of any offense, the type of weapon must be identified.
- 3) assault on school personnel: An assault is an intentional physical attack by one person on another. An assault is either the actual intentional striking of another person, or an attempt to physically strike another by an intentional show of force or menace of violence sufficient to put a reasonable person in fear of immediate physical injury. This offense includes assaults on school personnel that do not involve use of a weapon and do not result in apparent serious injury. If apparent serious injury to school personnel results from the assault, report as assault resulting in serious injury. If the assault involves use of a weapon, report as assault involving use of a weapon. Victims included in this category are school administrators, education professionals (e.g. teachers), classified staff members (e.g. custodial, clerical), and adult volunteers. Acts which would not be reported are things such as unintentional pushing and jostling, as in a crowd; a school staff member who is accidentally struck while attempting to break up a fight or affray; or a volunteer who is knocked down by a student carelessly rushing through a door. Verbal threats to physically attack are not included unless they are accompanied by an act that is an intentional show of force or menace of violence sufficient to put a reasonable person in fear of immediate physical injury.



- 4) bomb threat: Making or communicating a false bomb threat in any form, including a computer message; or perpetrating a bomb threat hoax by bringing a fake explosive device, whether openly or concealed, onto school property or to school-sponsored events.
- 5) burning of a school building: Any person who maliciously and willfully sets fire to, burns or causes to be burned (i.e. aids, directs or procures the burning of) any school building owned, leased or used by the public schools.
- 6) death by other than natural causes: The killing of a living person, done either by another or by suicide. Acts to be reported under this category include murder, manslaughter, death by vehicle, killing in self-defense, killing done by an insane person, accidental killing and suicide. Killing is to be reported if either the death or the act causing it occurred on school property, and regardless of whether the victim is associated with the school. Examples of incidents to be reported are the accidental death of a child in a school bus accident, or a victim on school property shot by someone located on or off school property.
- 7) kidnapping: Confining, restraining or removing from one place to another a person, without his/her or the victim's or a minor victim's parents' consent, for the purpose of committing a felony; or holding a victim as hostage or for ransom, or for use as a shield. A parent taking a child in violation of a court order, although it may be a crime, is not kidnapping for this purpose.
- 8) possession of alcoholic beverage: Any underage person who purchases, provides or sells to another, possesses or has in his/her immediate custody or control, or consumes malt beverages, fortified or unfortified wine, or spirituous liquor, in any amount or form, on school property owned or leased by the local board of education, or at school-sponsored events.
- 9) possession of controlled substance in violation of law: Possession of narcotic drugs on or in the immediate control of the person. Narcotic drugs include any form of cocaine, marijuana, heroin, LSD, methamphetamine, and all drugs listed in the North Carolina Controlled Substances Act. Possession of any amount in any form must be reported. Unauthorized possession of a prescription drug (e.g., Ritalin) is included in this category. The principal should confer with law enforcement personnel when in doubt as to whether a drug is a controlled substance. Alcohol possession should be reported as possession of alcoholic beverage.
- 10) possession of a firearm or powerful explosive: Any unauthorized person possessing on their person or within their custody or control, or storing, or carrying, whether openly or concealed, locked or unlocked, any firearm or powerful explosive, whether operable or inoperable, on school property; or bringing such a device onto school property. Persons authorized to carry

weapons on school property are law enforcement officers, firefighters, and emergency service personnel when discharging their official duties (State law G.S. 115C-391 requires that local boards of education suspend for 365 days any student who brings a "weapon" onto school property. Weapons are defined as any gun, rifle, pistol, or other firearm of any kind, or any dynamite cartridge, bomb, grenade, mine or other powerful explosive, as defined in G.S. 14-284.1; and this does not apply to fireworks. Superintendents may modify the suspension on a case-by-case basis, but a written explanation for the decision must be included with the school's Annual Report on School Crime and Violence). Firearm type(s) must be identified in the weapon field of the USDDC.

- 11) possession of a weapon: Possessing on their person or within their custody or control, storing, or carrying, by any unauthorized person, whether openly or concealed, a weapon, excluding firearms and powerful explosives, defined as follows: Any BB gun, stun gun, air rifle, air pistol, bowie knife, dirk, dagger, slingshot, leaded cane, switchblade knife, blackjack, metallic knuckles, razors and razor blades, any sharp pointed or edged instrument except instructional supplies, unaltered nail files and clips and tools used solely for preparation of food, instruction and maintenance. This category covers possession of all weapons, other than firearms and powerful explosives, which the law prohibits on educational property (N.C.G.S. § 14-269.2). Persons authorized to possess such weapons are law enforcement officers, firefighters and emergency service personnel when discharging their official duties. Report type of weapon unlawfully possessed in the weapon field of the USDDC.
- 12) rape: Rape may be statutory or forcible. Forcible rape is vaginal intercourse committed by force and without the consent of the victim, regardless of age. Statutory rape is vaginal intercourse committed on a child under the age of 16 by a person who is at least 12 years old and at least 4 years older than the victim, regardless of whether the victim consented. Consensual vaginal intercourse between a 13, 14 or 15 year old girl or boy and a 16 year old girl or boy is not a crime; statutory rape requires at least four years between birthdays of the victim and perpetrator. Some examples of incidents which must be reported under this category are consensual intercourse between a 19-year old and a 15-year old; consensual intercourse with a person who is mentally handicapped or incapacitated, or physically helpless, regardless of whether the victim consented; or intercourse with an intoxicated or drugged victim who is too incapacitated to give consent.
- 13) robbery with a dangerous weapon (armed robbery): Theft or attempted theft of anything of value from the person of another, or from the area under the immediate bodily control of the other, by using a dangerous weapon or by an act threatening use of a dangerous weapon. A dangerous weapon is any article, instrument or substance that is likely to produce death or great bodily harm. Forcible theft or attempted theft from a person without the use of a dangerous

weapon should be reported under robbery without a dangerous weapon.

- 14) robbery without a dangerous weapon: The taking or attempting to take anything of value from another's person, by force, or by an act threatening force or violence, which puts a victim in fear, without the use of a weapon. The stealing of someone's property without the use of force or from a source other than the victim's person is not included in this offense. If the taking from the person involves use of a dangerous weapon the incident is reported under robbery with a dangerous weapon.
- 15) sexual assault (not involving rape or sexual offense): An assault of a sexual nature. An unauthorized and unwanted, intentional, or forcible touching of a sex organ of a person of the opposite sex. Sex organs are the breasts of females and genital areas of males and females. This category includes forcibly and intentionally grabbing the clothed or unclothed breast or genitals of a person of the opposite sex, without the consent of the victim. Report attempted rape and attempted sexual offense under this category. The difference between sexual assault and sexual offense is that sexual assault involves forcible and intentional touching without penetration of a sex organ, and sexual offense involves penetration of a sex organ or anus by any object, or touching another's mouth or anus by the male sex organ.
- 16) sexual offense: Sexual offense may be forcible or statutory. Forcible sexual offense is actual oral-genital contact, or penile-anal penetration, or insertion of any object, including a finger, into the genital or anal opening of another person's body, committed by force and without the consent of the victim. Statutory sexual offense is any of the above acts committed on a child under the age of 16 by a person who is at least 12 years old and at least 4 years older than the victim, regardless of whether the victim consented. Statutory sexual offense is also any of the above acts committed on a person who is mentally handicapped or incapacitated or physically helpless, regardless of whether the victim consented. The difference between rape and sexual offense is that rape involves vaginal intercourse only, and sexual offense involves oral-genital contact, penile-anal penetration, or genital or anal penetration by any object.
- 17) taking indecent liberties with a minor: Committing a sexual act with or in the presence of a child under the age of 16 years, by a person at least age 16 and at least five years older than the child, for sexual gratification, regardless of whether force was used, or whether the victim consented. Examples of acts to be reported under this category are intentional exposure of genitals in front of a child; showing a child pornography, secretly or in the child's presence; or photographing girls changing clothes or using toilets, if these acts are done for sexual gratification.

APPENDIX B: EMAIL TO NORTH CAROLINA PUBLIC INFORMATION OFFICERS  
(PIOS) ABOUT SCHOOL UNIFORMS

The following is the email that was sent to all North Carolina school districts and their public information officers requesting information about the use of school uniforms in their school district.

Colleagues,

Good day!

My name is Wesley Johnson and I am principal of Hobbton High School in Newton Grove, North Carolina (Sampon County Schools).

I am in the process of finishing my EdD from East Carolina University and am writing a dissertation on NC high school safety measures, in particular school uniforms, and investigating the Crime and Violence Reports from 2004-2005, 2005-2006, 2006-2007, 2007-2008, and 2008-2009.

My chair and committee are requiring me to collect the following information from every LEA in the state, so I figured email would be the easiest method.

Please help me with the following very easy to answer questions:

- 1) How many traditional high schools are presently in your LEA?
- 2) Please list/identify the traditional high schools in your LEA that **have** required uniforms/standardized dress since August 2004 (the 2004-2005 school year). If all high schools in your LEA have required uniforms/standardized dress since 2004-2005 school year, you may put all.
- 3) If a high school or high schools in your LEA adopted uniforms/standardized dress **after** the 2004-2005 school year, please list/identify the high schools. If all high school now require standardized dress/uniforms, you may put all.

Thanks for any help you can provide.

Again, I am required to collect this information one way or another.

Wesley

## APPENDIX C: NORTH CAROLINA SCHOOL DISTRICTS

### WITH AND WITHOUT SCHOOL UNIFORMS

The following is a list of all 115 North Carolina school districts/local education agencies (LEAs) and whether or not they have at least one high school that requires uniforms and how the information was collected. If at least one high school in the LEA requires school uniforms, the implementation year is also listed.

### NC LEA School Uniform Information

<b>Name of LEA</b>	<b>Number of High Schools</b>	<b>Uniforms/SMOD</b>	<b>Year Implemented</b>	<b>How Acquired</b>
Alamance-Burlington	6	No		Email
Alaxander	1	No		Email
Alleghany	1	No		Email
Anson	1	Yes	2006-07	Internet
Ashe	1	No		Internet
Asheville City	1	No		Email
Asheboro City	1	No		Email
Avery	1	No		Email
Beaufort	3	Yes	2007-08	Internet
Bertie	1	Yes	2006-07	Email
Bladen	2	No		Email
Brunswick	3	No		Internet
Buncombe	6	No		Email
Burke	4	No		Email
Cabarrus	7	No		Email
Caldwell	3	No		Email
Camden	2	No		Email
Carteret	3	No		Internet
Caswell	1	No		Internet
Catawba	5	No		Email
Chapel-Hill/Carboro	3	No		Email
Charlotte-Meck	17	No		Phone
Chatham	3	No		Email
Cherokee	3	No		Internet
Clay	1	No		Internet
Cleveland	4	No		Email
Clinton City	1	No		Email
Columbus	3	No		Internet
Craven	3	Yes – 1		Email
		West Craven	2008-09	
Cumberland	10	No		Internet
Currituck	1	No		Email
Dare	3	No		Email
Davidson	6	No		Email
Davie	1	No		Internet
Duplin	4	No		Internet
Durham	6	No		Email
Edenton-Chowan	1	No		Email

Edgecombe	3	No		Email
Elkin City	1	No		Internet
Elizabeth City/Pasqu	2	No		Email
Franklin	3	No		Email
Gaston	9	No		Email
Gates	1	No		Email
Graham	1	No		Internet
Granville	2	No		Email
Greene	1	Yes	2008-09	Internet
Guilford	15	Yes - 8		Email
		Andrew HS	2007-08	
		Dudley HS	2006-07	
		High-Point Central	2007-08	
		Northeast HS	2008-09	
		Ragsdale HS	2008-09	
		Smith HS	9th Grade - 2007- 08	
			10th Grade - 2008-09	
		Southern HS	2007-08	
		Southwest HS	2007-08	
Halifax	2	Yes	2000-01	Email
Harnett	4	No		Email
Haywood	2	No		Internet
Henderson	4	No		Email
Hertford	1	Yes	2007-08	Internet
Hickory	2	Yes	2008-09	Internet
Hoke	1	No		Email
Hyde	2	No		Email
Iredell-Statesville	5	No		Email
Jackson	1	No		Internet
Johnston	6	No		Email
Jones	1	Yes	2006-07	Email
Kannapolis City	1	Yes	2006-07	Email
Lee	2	No		Email
Lenior	3	No		Email
Lexington City	1	Yes	2009-10	Email
Lincoln	4	No		Email
Macon	3	No		Email
Madison	1	No		Internet
Martin	4	Yes	2005-06	Phone
McDowell	1	No		Email
Mitchell	1	No		Internet
Montgomery	2	No		Email
Moore	3	No		Email
Mooresville City	1	No		Phone
Mt. Airy City	1	No		Email
Nash/Rocky Mount	4	No		Email
New Hanover	4	Yes	2009-10	Internet
Newton-Conover	1	No		Internet

Northampton	2	Yes	2005-06	Email
Onslow	7	No		Email
Orange	2	No		Internet
Pamlico	1	Yes	2006-07	Email
Pender	3	No		Email
Perquimans	1	No		Email
Person	1	No		Email
Pitt	6	Yes	2008-09	Email
Polk	1	No		Phone
Randolph	5	No		Internet
Richmond	1	Yes	2004-05	Internet
Roanoke-Rapids City	1	No		Phone
Robeson	6	No		Internet
Rockingham	4	No		Email
Rowan-Salisbury	6	No		Email
Rutherford	3	No		Email
Sampson	4	No		Email
Scotland	1	No		Internet
Stanly	4	No		Internet
Stokes	4	No		Internet
Surry	3	No		Email
Swain	1	No		Phone
Thomasville City	1	No		Phone
Transylvania	2	No		Internet
Tyrell	1	Yes	2006-07	Internet
Union	10	No		Email
Vance	2	No		Email
Wake	19	No		Email
Warren	1	Yes	2008-09	Email
Washington	2	Yes	2008-09	Internet
Watauga	1	No		Email
Wayne	6	No		Email
Weldon City	1	No		Email
Whiteville City	1	No		Internet
Wilkes	4	No		Internet
Wilson	3	No		Email
Winston-Salem/Fors	10	No		Email
Yadkin	2	No		Internet
Yancey	1	No		Email

\*Nine North Carolina High Schools adopted uniforms or had them prior to 2005-06.

\*\*Sixteen North Carolina High Schools adopted uniforms or had them prior to 2006-2007.

\*\*\*Twenty-five North Carolina High Schools adopted uniforms or had them prior to 2007-2008.

\*\*\*\*Forty North Carolina High Schools adopted uniforms or had them prior to 2008-2009.

\*\*\*\*\*Forty-five North Carolina High Schools adopted uniforms or had them prior to 2009-2010.

## APPENDIX D: DISSERTATION SURVEY LETTER AND QUESTIONS

Dear North Carolina High School Administrators:

My name is Wesley S. Johnson. I am a high school principal in Sampson County and a doctoral candidate in the Department of Educational Leadership at East Carolina University. I am presently investigating the impact of school uniforms on violence in North Carolina public high schools. You are being sent this survey because you are a principal or assistant principal of a high school in North Carolina that requires school uniforms. The survey contains eight items in the form of a four-point Likert-type scale, one being strongly disagree, two being disagree, three being agree, and four being strongly agree. With only eight response items, the survey should take no longer than 5-10 minutes.

Your participation in this survey is entirely voluntary and anonymous. If you wish to participate in this survey, click on the "accept" button below. Also, by clicking the "accept" button, this will provide you access to the survey so you may respond to the questions.

Thank you in advance for your consideration of this request.

**"Accept"**

### Survey Questionnaire

- 1) From my experience, school uniforms have assisted faculty members in the recognition of outsiders or guest on the school campus.
- 2) From my experience, students wearing school uniforms have better classroom behavior.
- 3) From my experience, school uniforms assisted in reducing the number of disciplinary referrals at my school.
- 4) From my experience, school uniforms helped to decrease the number of short-term suspensions at my school.
- 5) From my experience, school uniforms helped to reduce the number of severe discipline incidents.
- 6) From my experience, school uniforms helped to restrict or remove gang attire.
- 7) From my experience, school uniforms assisted in reducing the number of incidents of crime and violence.
- 8) From my experience, school uniforms have helped to create a safer school environment.



APPENDIX E: NORTH CAROLINA COHORT HIGH SCHOOLS PRE- AND  
POST-SCHOOL UNIFORM DATA FOR INCIDENTS OF CRIME AND VIOLENCE

Cohort School Name	No Change	Positive Change	Negative Change
1A	X		
2A	X		
2B	X		
2C		X	
2D	X		
2E	X		
2F	X		
3A	X		
3B	X		
3C	X		
3D	X		
3E			X
3F	X		
3G	X		
4A	X		
4B	X		
4C			X
4D	X		
4E	X		
4F	X		
4G	X		
4H			X
4I	X		
5A		X	
5B	X		
5C		X	
5D	X		
5E	X		
5F	X		
5G	X		
5H	X		
5I	X		
5J	X		
5K	X		
5L		X	
5M	X		
5N	X		
5O	X		

APPENDIX F: NORTH CAROLINA COHORT HIGH SCHOOLS PRE- AND POST-  
SCHOOL UNIFORM DATA FOR RATES OF CRIME AND VIOLENCE INCIDENTS PER  
1,000 STUDENTS

Cohort School School	No Change	Positive Change	Negative Change
1A	X		
2A	X		
2B	X		
2C		X	
2D	X		
2E	X		
2F			X
3A			X
3B	X		
3C	X		
3D	X		
3E			X
3F	X		
3G	X		
4A	X		
4B	X		
4C			X
4D	X		
4E	X		
4F	X		
4G	X		
4H			X
4I	X		
5A	X		
5B	X		
5C		X	
5D	X		
5E	X		
5F	X		
5G	X		
5H	X		
5I	X		
5J	X		
5K	X		
5L		X	
5M	X		
5N	X		

50	X		
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APPENDIX G: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM CRIME AND VIOLENCE INCIDENTS RATES COMPARED

TO NORTH CAROLINA STATE RATE

School Year	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
NC State Rate	14.90	15.08	15.57	15.57	15.70
School					
1A	Below	Below	Below	Below	Below
2A		Below	Below	Below	Below
2B		Below	Below	Above	Below
2C		Below	Below	Below	Below
2D		Below	Below	Below	Below
2E		Below	Below	Below	Above
2F		Above	Below	Above	Above
3A			Above	Above	Above
3B			Below	Above	Below
3C			Above	Above	Below
3D			Below	Above	Below
3E			Above	Above	Above
3F			Above	Above	Below
3G			Above	Below	Above
4A				Below	Below
4B				Above	Above
4C				Above	Above
4D				Below	Above
4E				Below	Above
4F				Below	Above
4G				Above	Below
4H				Below	Below
4I				Above	Below
5A					Above
5B					Below
5C					Above
5D					Below
5E					Above
5F					Above
5G					Above
5H					Below
5I					Above
5J					Above
5K					Above
5L					Below

5M					Above
5N					Below
5O					Below

APPENDIX H: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM CRIME AND VIOLENCE INCIDENTS RATES COMPARED

TO NORTH CAROLINA STATE RATES FOR 2004-2005, 2005-2006, AND 2006-2007

School Year	2004-2005	2005-2006	2006-2007
NC State Rate	14.90	15.08	15.57
School			
1A	Below	Below	Below
2A		Below	Below
2B		Below	Below
2C		Below	Below
2D		Below	Below
2E		Below	Below
2F		Above	Below
3A			Above
3B			Below
3C			Above
3D			Below
3E			Above
3F			Above
3G			Above

APPENDIX I: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM CRIME AND VIOLENCE INCIDENTS RATES COMPARED  
TO NORTH CAROLINA STATE RATES FOR 2007-2008 AND 2008-2009

School Year	2007-2008	2008-2009
NC State Rate	15.57	15.70
School		
1A	Below	Below
2A	Below	Below
2B	Above	Below
2C	Below	Below
2D	Below	Below
2E	Below	Above
2F	Above	Above
3A	Above	Above
3B	Above	Below
3C	Above	Below
3D	Above	Below
3E	Above	Above
3F	Above	Below
3G	Below	Above
4A	Below	Below
4B	Above	Above
4C	Above	Above
4D	Below	Above
4E	Below	Above
4F	Below	Above
4G	Above	Below
4H	Below	Below
4I	Above	Below
5A		Above
5B		Below
5C		Above
5D		Below
5E		Above
5F		Above
5G		Above
5H		Below
5I		Above
5J		Above
5K		Above
5L		Below

5M		Above
5N		Below
5O		Below



APPENDIX J: NORTH CAROLINA COHORT HIGH SCHOOLS PRE- AND  
POST-SCHOOL UNIFORM DATA FOR NUMBERS OF SUSPENSIONS

Cohort School Name	No Change	Positive Change	Negative Change
1A		X	
2A	X		
2B		X	
2C		X	
2D	X		
2E	X		
2F	X		
3A	X		
3B			X
3C	X		
3D	X		
3E	X		
3F	X		
3G		X	
4A	X		
4B	X		
4C	X		
4D	X		
4E	X		
4F	X		
4G	X		
4H			X
4I	X		
5A		X	
5B	X		
5C	X		
5D	X		
5E	X		
5F	X		
5G	X		
5H	X		
5I	X		
5J	X		
5K	X		
5L	X		
5M	X		
5N		X	
5O	X		

APPENDIX K: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM CRIME YEARLY SUSPENSION RATES COMPARED TO

NORTH CAROLINA STATE RATES

Table 10: Cohort Yearly Suspension Rates Compared to NC HS State Rates

School Year	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009
NC HS State Rate	37	35	36	35	35
School					
1A	Below	Below	Below	Below	Below
2A		Above	Above	Above	Above
2B		Below	Below	Below	Below
2C		Above	Above	Above	Above
2D		Below	Below	Below	Above
2E		Above	Above	Above	Above
2F		Above	Above	Above	Above
3A			Above	Above	Above
3B			Below	Below	Below
3C			Below	Below	Below
3D			Below	Below	Below
3E			Above	Above	Above
3F			Above	Above	Above
3G			Below	Above	Below
4A				Below	Below
4B				Above	Below
4C				Above	Above
4D				Above	Above
4E				Below	Above
4F				Above	Above
4G				Above	Above
4H				Below	Below
4I				Above	Above
5A					Above
5B					Above
5C					Above
5D					Equal
5E					Above
5F					Below
5G					Above
5H					Above
5I					Above
5J					Above
5K					Above

5L					Above
5M					Above
5N					Below
50					Above

APPENDIX L: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM YEARLY SUSPENSION RATES COMPARED TO NORTH

CAROLINA STATE RATES FOR 2004-2005, 2005-2006, AND 2006-2007

School Year	2004-2005	2005-2006	2006-2007
NC HS State Rate	37	35	36
School			
1A	Below	Below	Below
2A		Above	Above
2B		Below	Below
2C		Above	Above
2D		Below	Below
2E		Above	Above
2F		Above	Above
3A			Above
3B			Below
3C			Below
3D			Below
3E			Above
3F			Above
3G			Below

APPENDIX M: NORTH CAROLINA COHORT HIGH SCHOOLS

POST-SCHOOL UNIFORM YEARLY SUSPENSION RATES COMPARED TO NORTH

CAROLINA STATE RATES FOR 2007-2008 AND 2008-2009

School Year	2007-2008	2008-2009
NC HS State Rate	35	35
School		
1A	Below	Below
2A	Above	Above
2B	Below	Below
2C	Above	Above
2D	Below	Above
2E	Above	Above
2F	Above	Above
3A	Above	Above
3B	Below	Below
3C	Below	Below
3D	Below	Below
3E	Above	Above
3F	Above	Above
3G	Above	Below
4A	Below	Below
4B	Above	Below
4C	Above	Above
4D	Above	Above
4E	Below	Above
4F	Above	Above
4G	Above	Above
4H	Below	Below
4I	Above	Above
5A		Above
5B		Above
5C		Above
5D		Equal
5E		Above
5F		Below
5G		Above
5H		Above
5I		Above
5J		Above
5K		Above
5L		Above

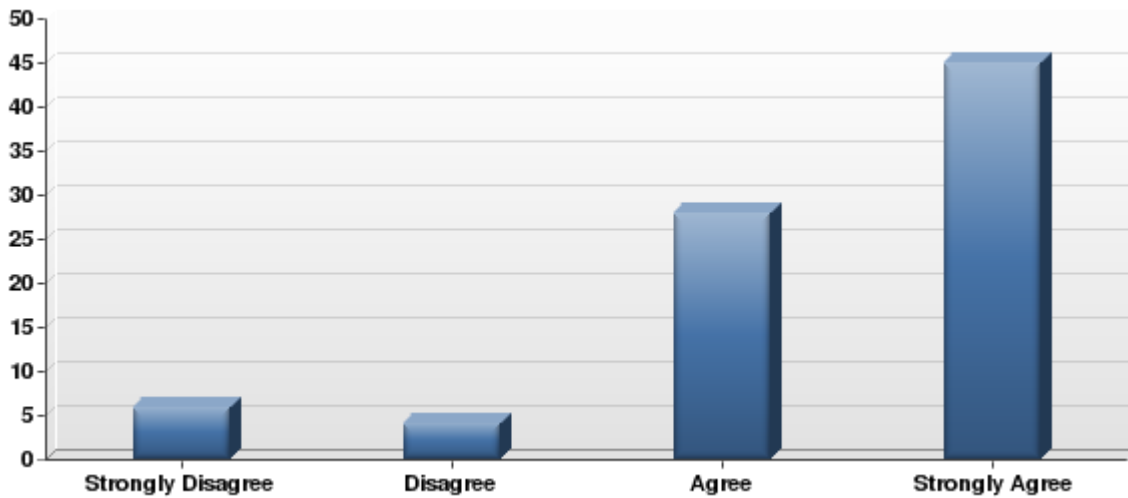
5M		Above
5N		Below
50		Above

APPENDIX N: NORTH CAROLINA COHORT HIGH SCHOOLS  
 POST-SCHOOL UNIFORM YEARLY SUSPENSION RATES COMPARED TO NORTH  
 CAROLINA STATE RATES FOR 2008-2009

School Year	2008-2009
NC HS State Rate	35
School	
5A	Above
5B	Above
5C	Above
5D	Equal
5E	Above
5F	Below
5G	Above
5H	Above
5I	Above
5J	Above
5K	Above
5L	Above
5M	Above
5N	Below
5O	Above

APPENDIX O: ON-LINE LIKERT SURVEY RESULTS OF COHORT  
ADMINISTRATORS

**1) From my experience, school uniforms have assisted faculty members in the recognition of outsiders or guest on the school campus.**

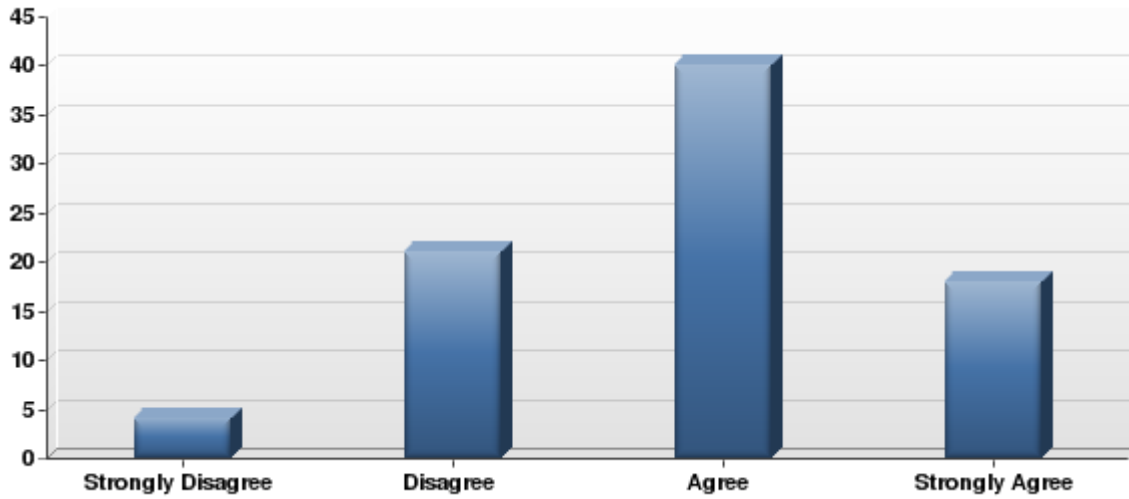


#	Answer	Response	%
1	Strongly Disagree	6	7%
2	Disagree	4	5%
3	Agree	28	34%
4	Strongly Agree	45	54%
	Total	83	100%

Statistic	Value
Mean	3.35
Variance	0.77
Standard Deviation	0.88
Total Responses	83

**2) From my experience, students wearing school uniforms have better classroom behavior.**

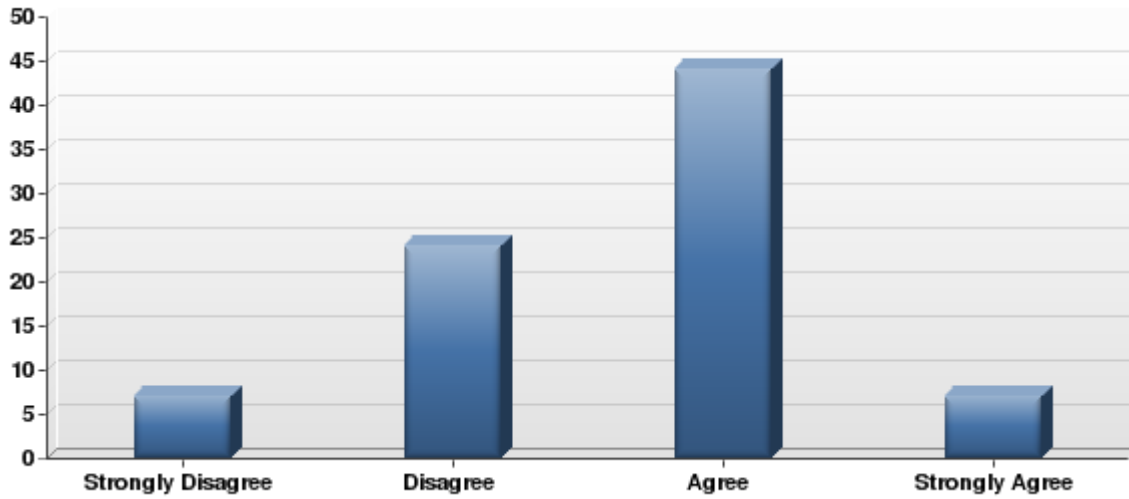




#	Answer	Response	%
1	Strongly Disagree	4	5%
2	Disagree	21	25%
3	Agree	40	48%
4	Strongly Agree	18	22%
	Total	83	100%

Statistic	Value
Mean	2.87
Variance	0.65
Standard Deviation	0.81
Total Responses	83

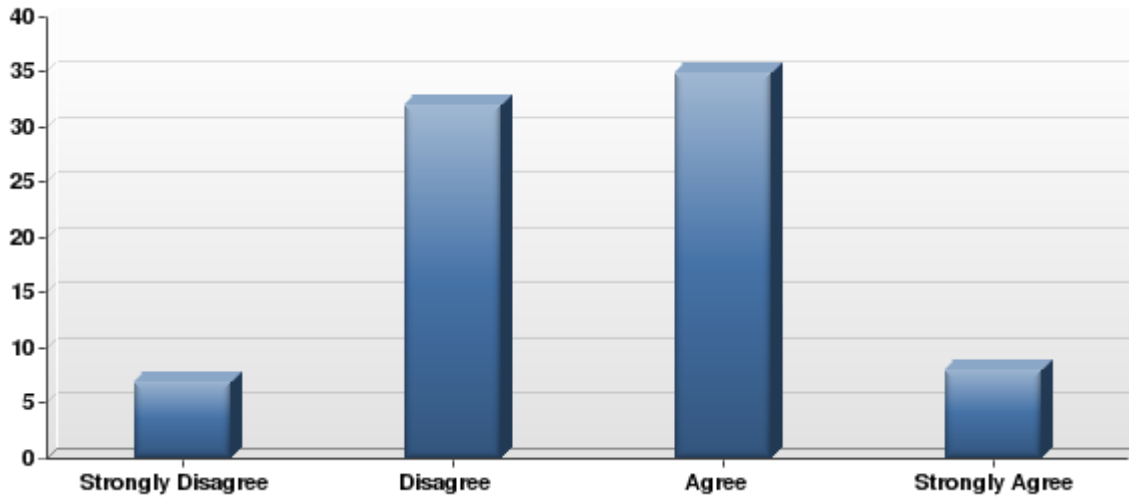
**3) From my experience, school uniforms assisted in reducing the number of disciplinary referrals at my school.**



#	Answer	Response	%
1	Strongly Disagree	7	9%
2	Disagree	24	29%
3	Agree	44	54%
4	Strongly Agree	7	9%
	Total	82	100%

Statistic	Value
Mean	2.62
Variance	0.58
Standard Deviation	0.76
Total Responses	82

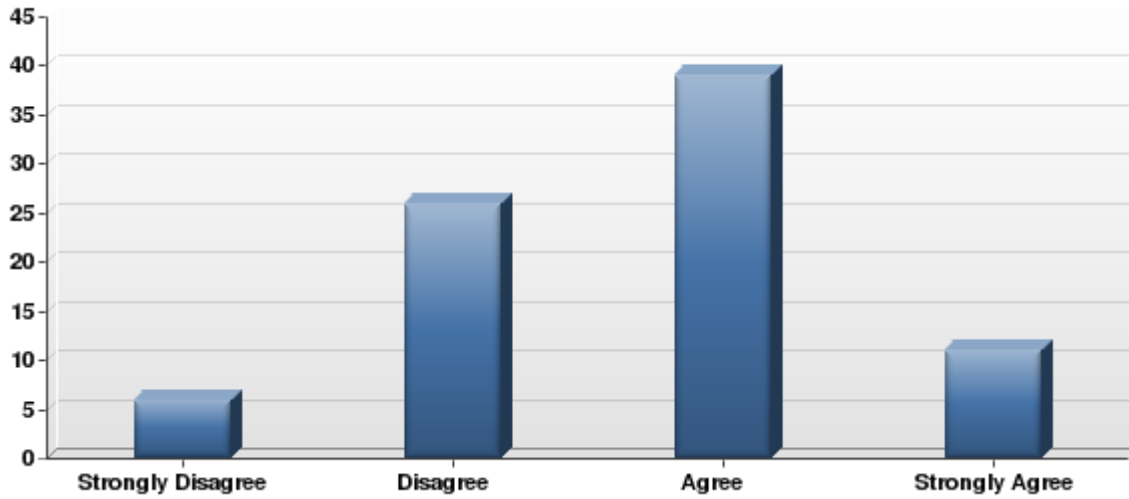
**4) From my experience, school uniforms helped to decrease the number of short-term suspensions at my school.**



#	Answer	Response	%
1	Strongly Disagree	7	9%
2	Disagree	32	39%
3	Agree	35	43%
4	Strongly Agree	8	10%
	Total	82	100%

Statistic	Value
Mean	2.54
Variance	0.62
Standard Deviation	0.79
Total Responses	82

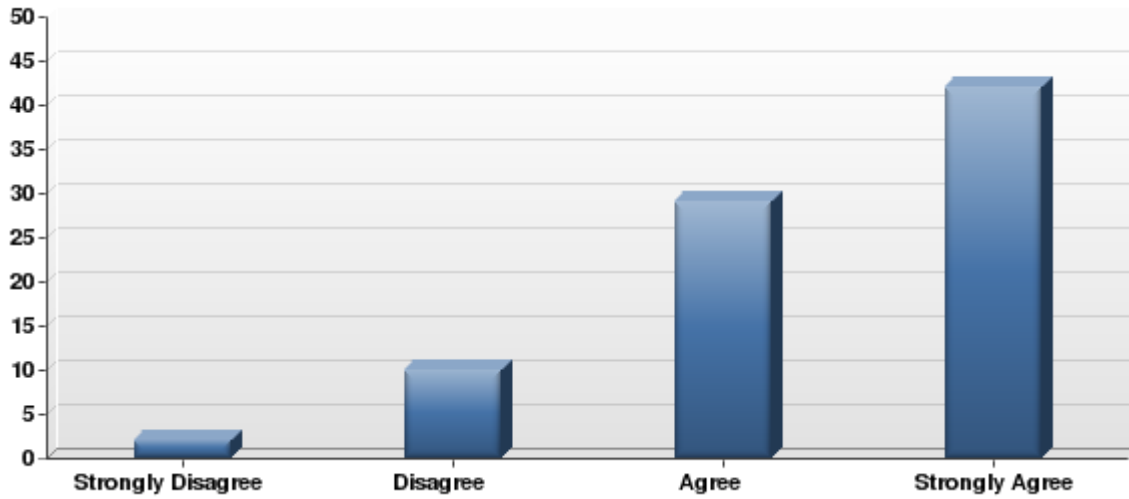
**5) From my experience, school uniforms helped to reduce the number of severe discipline incidents.**



#	Answer	Response	%
1	Strongly Disagree	6	7%
2	Disagree	26	32%
3	Agree	39	48%
4	Strongly Agree	11	13%
	Total	82	100%

Statistic	Value
Mean	2.67
Variance	0.64
Standard Deviation	0.80
Total Responses	82

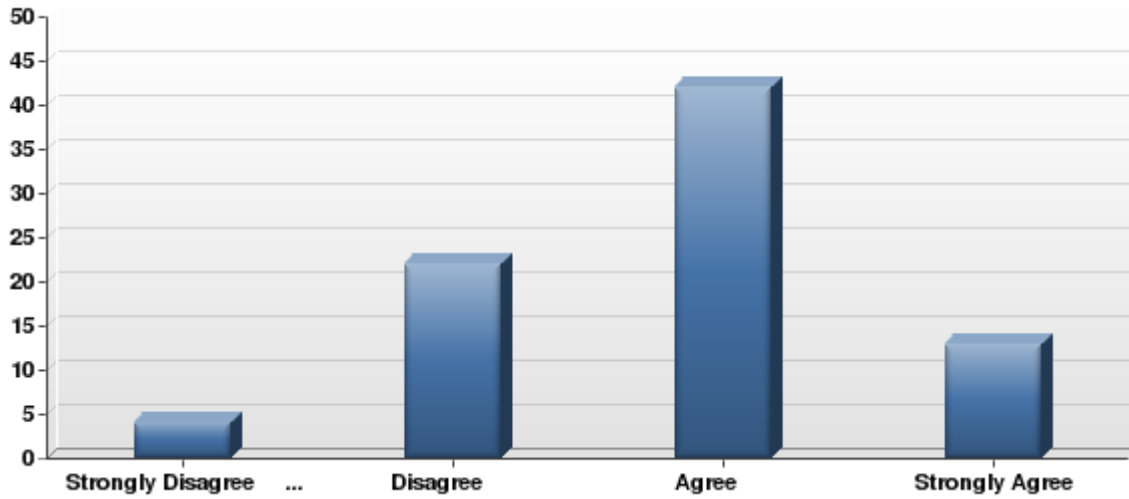
**6) From my experience, school uniforms helped to restrict or remove gang attire.**



#	Answer	Response	%
1	Strongly Disagree	2	2%
2	Disagree	10	12%
3	Agree	29	35%
4	Strongly Agree	42	51%
	Total	83	100%

Statistic	Value
Mean	3.34
Variance	0.62
Standard Deviation	0.79
Total Responses	83

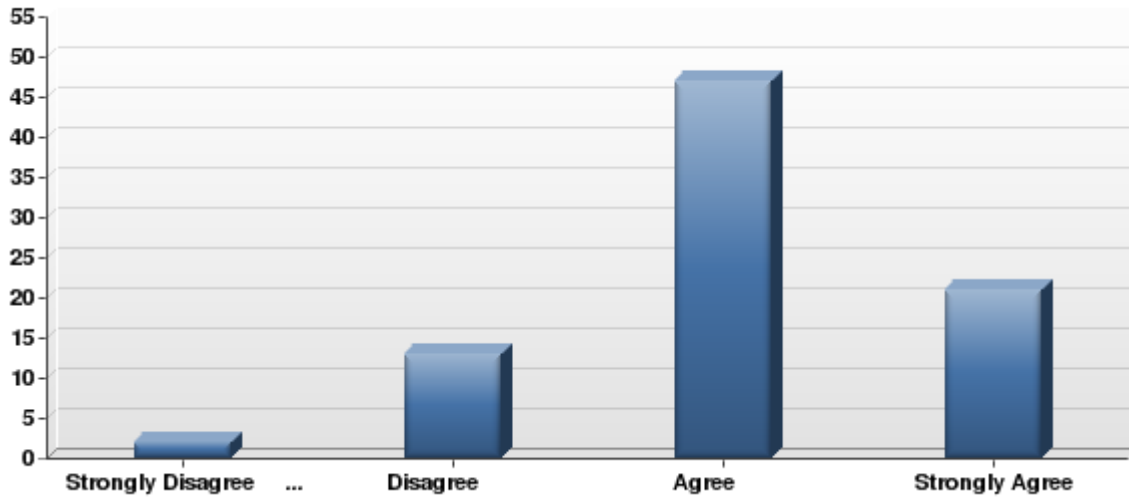
**7) From my experience, school uniforms assisted in reducing the number of incidents of crime and violence.**



#	Answer	Response	%
1	Strongly Disagree	4	5%
2	Disagree	22	27%
3	Agree	42	52%
4	Strongly Agree	13	16%
	Total	81	100%

Statistic	Value
Mean	2.79
Variance	0.59
Standard Deviation	0.77
Total Responses	81

**8) From my experience, school uniforms have helped to create a safer school environment.**



#	Answer	Response	%
1	Strongly Disagree	2	2%
2	Disagree	13	16%
3	Agree	47	57%
4	Strongly Agree	21	25%
	Total	83	100%

Statistic	Value
Mean	3.05
Variance	0.51
Standard Deviation	0.71
Total Responses	83

## APPENDIX P: INSTITUTIONAL REVIEW BOARD APPROVAL LETTER



**University and Medical Center Institutional Review Board**  
East Carolina University, 600 Moye Boulevard  
1L-09 Brody Medical Sciences Bldg. • Greenville, NC 27834  
Office 252-744-2914 • Fax 252-744-2284 • [www.ecu.edu/irb](http://www.ecu.edu/irb)  
Chair and Director of Biomedical IRB: T. Wiley Nifong, MD  
Chair and Director of Behavioral and Social Science IRB: Susan L. McCammon, PhD

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**Date:** March 16, 2010

**Principal Investigator:** Wesley Scott Johnson  
**Address:** 82 Bagley Lane  
Dunn, NC 28334

**RE:** Exempt Certification *req*  
**UMCIRB#** 10-0141  
**Funding Source:** Unfunded

**Title:** Analysis of the Impact of School Uniforms on Violence in North Carolina Public High Schools

Dear Wesley Scott Johnson:

On 3.10.10, the University & Medical Center Institutional Review Board (UMCIRB) determined that your research meets ECU requirements and federal exemption criterion #2 & 4 which includes research involving the use of educational tests and also involves collection or study of existing data, documents, and records.

It is your responsibility to ensure that this research is conducted in the manner reported in your Internal Processing Form and Protocol, as well as being consistent with the ethical principles of the Belmont Report and your profession.

This research study does not require any additional interaction with the UMCIRB unless there are proposed changes to this study. Any change, prior to implementing that change, must be submitted to the UMCIRB for review and approval. The UMCIRB will determine if the change impacts the eligibility of the research for exempt status. If more substantive review is required, you will be notified within five business days.

The UMCIRB Office will hold your exemption application for a period of five years from the date of this letter. If you wish to continue this protocol beyond this period, you will need to submit an Exemption Certification Request at least 30 days before the end of the five year period.

Sincerely,

Chairperson, University & Medical Center Institutional Review Board

Cc: Dr. William A. Rouse, Jr.