

THE GIRL FACTOR: HOW SINGLE-SEX LEARNING ENVIRONMENTS AFFECT
AFRICAN AMERICAN GIRLS' DISCIPLINE REFERRAL RATE

by

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Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

Liberty University

2016

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ABSTRACT

The mission of the single-sex education is to provide learning environments that will bring out the best in each student and will provide opportunities for success that may not be available in co-educational settings. Several explanations have been suggested for differences between single-sex and coeducational settings in educational processes and in student outcomes. Schools that implement single-sex schools do so with the hope of decreasing the social pressures and distractions that will lead to a decrease in office discipline referrals which unenviably lead to suspensions. The purpose of this ex-post facto casual comparative study examines the impact single-sex schools have on the office discipline referral rates of African American girls collected from two middle schools in an urban district in northeast Florida, one a single-sex middle school ($n=212$) and a co-educational setting ($n=239$). Chi-square test were conducted to examine an association in office discipline referrals by school type. The results demonstrated that there is a significant association between school setting (single-sex and co-educational) and the frequency of level of offenses in office discipline referrals. This study also seeks to realize the perceptions of the African American girls from the same single-sex and co-educational middle school using the Secondary Classroom Climate Assessment Instrument - Student survey. Independent t tests demonstrated that they were no significant differences between single-sex and co-educational school settings. This discussion provides school districts additional research to implement single sex-schools to effort to improve the excess discipline referrals in African American girls.

Keywords: single-sex education, gender, discipline referrals, two-way contingency table, chi square, co-educational, t -test, school climate, culture

Dedication

To my angel mother, Wreatha Keys, although she is no longer here in her earthly vessel, it was her words, “education is the key to unlock any door,” that inspired me to pursue my doctorate in education. Her unwavering love, support and encouraging words have been the wind beneath my wings.

To my husband, Eric, who prays daily for me. You stand in the gap countless days and nights shouldering the parenting and household chores for me while I attended classes and completed my dissertation. To my daughters, Destiny, Leah and Grace, for sacrificing their mommy and daughter time, I promise you this process has made me a better parent.

My mentor, Debbie Sapp. You saw certain qualities in me that I could not see in myself. When I grow up, I want to be just like you.

Most of all my heavenly Father, for in Him I live, move, and have my being.

Acknowledgments

I wish to acknowledge the contributions of the following individuals in the accomplishment of this degree:

I want to thank Dr. Michelle Barthlow. Thank you for being my dissertation chair, for all your advice and running this race with me. Without all those emails and text, I could not have continued. It has been a joy working with you.

I also want to thank my committee members, Dr. Tamika Hibbert and Dr. LaTasha Bowen. Thank you for your prayers throughout the dissertation process. Your suggestions were helpful. I truly thank you for agreeing to take this journey with me and helping me reach my goals.

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List of Abbreviations

African American (AA)

Alliance for the Study of School Climate (ASSC)

Classroom Climate Quality Analytic Assessment Instrument (CCAI)

Comprehensive School Climate Inventory (CSCI)

Critical Race Theory (CRT)

Department of Education (DOE)

Florida Department of Education (FLDOE)

National Association for Single Sex Public Education (NASSPE)

No Child Left Behind (NCLB)

Office of Civil Rights (OCR)

Office Discipline Referral (ODR)

Pennsylvania System of School Assessment (PSSA)

Psychology of Success (POS)

School Climate Assessment Inventory (SCAI)

School Climate Inventory – Revised (SCI-R)

Schoolwide positive behavioral supports (SWPBS)

Social Emotional Learning (SEL)

Women’s Education Equality Act (WEEA)

CHAPTER ONE: INTRODUCTION

Background

Schools in America are attempting to prevent the school to prison pipeline for African American girls. As the daughter of a woman who lived most of her life in and out of the judicial system, even dying while incarcerated, it makes one wonder what school reforms like single-sex schools could have been implemented that could have minimized her behavior problems which led to suspension and other school distractions. Findings from data collected by the U.S. Department of Education, Office of Civil Rights (2014) revealed minority students are being removed from the classroom due to suspension at a much higher rate than their peers. A report presented by Losen and Skiba (2010), “Suspended Education: Urban Middle Schools in Crisis,” highlights the use of suspension by middle schools in 18 of the nation’s largest school districts to provide a clear picture of middle school disciplinary practices in large urban districts. The average suspension rate was 11.2% in 2006 in the middle schools surveyed, disaggregating the data by race and sex reveals great disparities in the use of out-of-school suspension. For example, for middle school African Americans, 28.3% of males and 18% of females were suspended. This 10-point difference in suspension rates by sex for African American students was the largest of any racial group (Losen & Skiba, 2010).

Statistics released by the US Department of Education for the 2011–2012 school year discovered that although African American males were suspended more than three times as often as white students, African American girls were suspended six times as often (2012). Wallace, Goodkind, Wallace, & Bachman (2008), studied existing models and patterns (1991 to 2005) in racial, ethnic, and gender disparities in school discipline. They found that African American, Hispanic, and American Indian youth were more likely than Caucasian and Asian American

youth to be referred to the office and more likely to be suspended or expelled. Even though the school discipline rates did decrease over time for many the other ethnic groups, for African American students, school discipline rates increased between 1991 and 2005. The number of Office Discipline Referrals (ODRs) received has been shown to be related with adverse student outcomes, including school dropout, lower achievement, academic failure, and antisocial behaviors Spaulding et al. (2010)

Hubbard and Datnow (2005), emphasize single-sex public education in the U.S. is “seen as a vehicle for improving the educational experiences of low-income and minority students.” Single-sex education refers to educational settings in which male and female students attend classes or schools exclusively with members of their own sex (Bond, et. al, 2013). In co-educational classrooms, male and female students are easily distracted by one another. They want to impress each other and often perform in ways that hinder their learning. In single-sex schools, teachers can focus on the learning style of each sex and tailor the classroom environment to advance the academic and social needs of each student.

The mission of single-sex education is to offer learning environments that will produce the best in each gender and will provide opportunities for success that may not be available in co-educational settings. Parochial and private schools have extended opportunities for students to attend single-sex schools in the United States. Since the early 1900s through the 1950s, single-sex schools were primarily Catholic. Private institutions were typically for the rich. Primarily single-female private schools were particularly crucial to separate wealthy, Caucasian girls in “pristine condition,” so to speak, from working class boys of various ethnicities (Salomone, 2003).

In 2006, The U.S. Department of Education regulations were reinterpreted to allow single-sex classes in coeducational schools under limited circumstances without violating Title IX. The provision required that such single-sex classes must be “substantially related” to the achievement of an important governmental or educational objective. Because of increased NCLB accountability and educational achievement gaps between boys and girls, many authorities have promoted single-sex education as a likely approach to improving student achievement. These amendments were stipulated by the No Child Left Behind Act of 2001, which had a specific focus on improving the academic achievement of low-income students of color (U.S. Department of Education, 2008). Klein (2012) believes No Child Left Behind demonstrates single-sex public schooling is viewed to improve the educational experiences and performance of low-income students of color, and it seems that many of the public schools offering single-sex education have high proportions of such youth.

African American youth who attend historically African American education institutions have been shown to be successful in single-sex schools, after having been unsuccessful in public schools (Ladson-Billings, 1994). Students from severely impoverished communities who attend private schools, beginning in the eighth grade, are three times more likely to get bachelor or higher degrees by their mid-20s than are public school students from the same socioeconomic backgrounds (Dyer, 2006). Meyer (2008) argues, “That single-sex schools will increase students’ academic performance through three avenues: by reducing distractions and harassment from the other sex, acknowledging sex differences in learning, and resolving past inequities by providing low-income youth of color with opportunities formerly allowed to more privileged youth.” This is just what happened at the Young Men’s and Women’s Leadership Academy at Eugene Butler in Jacksonville, Florida. The Young Men’s and Women’s Leadership Academy at Eugene J.

Butler is the first all-girls and boys school in Jacksonville to focus on the use of single sex strategies. The boys enrolled when pressed stated, “Although they miss talking to girls, admitted they’re less distracted now.” The girls at Butler, meanwhile, say “they love their new single-sex classroom setup”. Without the boys, they say, “there is more girlish “drama,” but no one picks on them and they’re more focused in class” (Duvall, 2015).

One of the perceived goals of single-sex schools is to decrease distractions and discipline problems. Sadker and Sadker (1995) argue that single-sex education is beneficial for girls because teachers’ and peers’ sexist attitudes and behaviors interfere with girls’ learning in coeducational environments. Herron (2014) describes how single-sex classrooms can benefit the teachers as well as the students. Heron observed the teachers as well as the students regarding gender-separated classes. Heron reported teachers felt more comfortable teaching a class of students of one gender. Teachers discovered that during class time the students were more attentive, comfortable and engaged in the lesson. The students enjoyed the single-sex classes as much as the teachers did. The students stated, “They enjoyed the single gender classes because it gave them the opportunity to work and learn without distractions” (Herron, 2014, p. 49). An additional observation but not intentional was a healthy competition between the separate gender classes. Once the students were told that, “the boys’ class” or “the girls’ class” was ahead in a lesson or project they felt the need to catch up to them. While this was not an intentional outcome, it has caused the students to work harder, and complete their tasks on time.

African American students’ disproportionality has been reported in studies across the nation for office disciplinary referrals (Bradshaw, Mitchell, O’Brennan, & Leaf, 2010). ODRs are records most often used to track student behaviors. The record usually reports the behavioral infraction that occurred, the location and date. Once a staff member observes a

student violating a school rule and submits the ODR documentation of the event, the administrative leadership then delivers a consequence to the student (Irvin et al., 2006). Schools often used ODRs to monitor student behavior problems and make decision concerning school discipline related policies.

Previous research findings have shown that the behavior problems that result in ODRs in school are likely to continue into adulthood. Discipline problems for boys at 8 to 10 years of age have been shown to predict violence at 16 to 18 years of age and at 32 years of age (Hawkins et al., 1998). Some researchers have challenged the validity of ODRs to examine student behavior, since the referral process can vary from school to school and even within a school (Morrison, Redding, Fisher & Peterson, 2006). Study findings presented by Pas, Bradshaw, & Mitchell (2011) suggested that ODRs are moderately valid indicators of student behavior problems and may be an efficient source of information for use in school-based research and data-based decision making.

One theoretical framework related to same-sex classrooms stems from the social learning. Social learning theory is one theoretical framework which is pertinent for examining social perceptions in respect to how people form impressions and make judgements about other people and how they react to other people when observing them. In social learning theory,

Bandura (1977) states new patterns of behavior can be acquired through direct experience of observing the behaviors of others. Behavior is learned from one's surroundings through the means of observational learning. Albert Bandura's explanation of behavior highlights how observing and modeling other people and their behaviors as well as attitudes and reactions to others is significant in the learning process. Social learning theory illustrates human behavior in terms of ongoing mutual interaction between cognitive, behavioral, and environmental

influences. Because of this, it is possible that the boys and girls in the single-sex classes will have more opportunity to observe their peers of the same gender that are excelling in class, and then model that behavior.

It is an educator's responsibility as the students' *in loco parentis*, which literally means "in place of the parent," to ensure that they are treated fairly. Critical Race Theory (CRT) highlights its interdisciplinary method to resolving and ameliorating the oppression of people of color (Simson, 2014). Milner (2008) says that critical race theorists are "concerned with disrupting, exposing, challenging, and changing racist policies that work to subordinate and disenfranchise certain groups of people and that attempt to maintain the status quo" (p. 333).

According to Parker and Lynn (2002), "In the case of African American women, race does not exist outside of gender and gender does not exist outside of race" (p. 12). Nationwide, 11 % of African American girls have been suspended out of school compared to only 7 % of Caucasian boys and 3 % of Caucasian girls (US DOE 2012). In a study conducted by Winkler-Wagner (2009), noted that teachers sometimes assigned disciplinary consequences against African American girls to have them conform to traditional standards of femininity as defined by Caucasian middle class culture; implied that girls and women must be silent, passive, and to place harmony in relationships over their own interests, desires, and feelings. African American females have not received ample attention in the literature concerning school discipline and its remedies. Most of the research has centered on African American males due to great disparities in suspension rates that are so much higher for African American males than for both Hispanic males and African American females (Losen & Gillespie, 2012).

Problem Statement

Many problems and answers have been researched regarding African American males' educational experiences (McFadden, Marsh, Prince, & Hwang, 1992; Shaw & Braden, 1990; Skiba, Micahel, Nardo, & Peterson, 2002; Taylor & Foster, 1986), but little research has been done to address the disparities and lack of support to help African American girls to be successful. Hudley (1997) and Noguera (1997) make a further argument that the focus on disadvantaged boys in the literature has ignored the problems faced by African American girls, who are also in crisis, although not as much as minority boys. Such solutions shown to be effective in improving school discipline or school climate include School-wide Positive Behavior Supports (SWPBS) frameworks that restructure school disciplinary practice, (Bradshaw, Koth, Thornton & Leaf, 2009), Social-Emotional Learning (SEL) programs that create supportive learning environments, (Durlak, Weissberg, & Pachan, 2010) and restorative justice programs geared to restore and repair the harm caused by the misbehavior (Jennings, Gover & Hitchcock, 2008). Crenshaw, Ocen, and Nanda (2015) state in their report "Black Girls Matter: Pushed Out, Overpoliced, and Underprotected" from the African American Policy Forum and the Center for Intersectionality and Social Policy Studies at Columbia Law School discussed how the disparities in the discipline, suspension and expulsion rates are separating African American girls from school. Moreover, girls are the fastest increasing subpopulation of the juvenile justice system (Watson & Elderman, 2012). The study called for the development of policies and programmatic interventions that address the challenges facing African American girls. They recommended expanding existing opportunities to ensure the inclusion of African American girls and in policy research, advocacy, programmatic interventions and the development of ways to help girls feel safe without an overreliance on punitive interventions (Crenshaw et al., 2014).

Previous research suggests that single-gender classrooms may provide learning environments where the female voice is not disregarded and these students are not dominated by males (Tully & Jacobs, 2010). Williams (2004) cautiously regards efforts to expand single-gender educational initiatives targeting both African American males and females as the remedy for what ails public schools peopled for the most part by low-income students of color” (p. 20). The problem is the literature has addressed single-sex schools increasing student motivation and academic achievement but the research has not adequately focused on single-sex schools for girls as an urban education reform to decrease the disparities in the discipline, suspension and expulsion rates of African American girls.

Purpose Statement

The purpose of this quantitative casual comparative study is to examine the relationship of single-sex schools on discipline referral rates to determine if the instructional setting is a factor in the discipline referral rate, using data collected from two middle schools in an urban district in northeast Florida, one a same-sex middle school and a co-educational middle school. Secondly, the study seeks to uncover in what ways do African American female students perceive their school’s climate in a single-sex and co-educational environment.

The independent categorical variable is defined as the type of educational setting (single-sex middle school vs. co-educational) in northeast Florida. The dependent categorical variable is defined as the number of referrals received by the African American middle school girls.

The independent variable is defined as the group of African American girls in a single-sex and co-educational public middle school located in northeast Florida. The four dependent variables in this study are the four subscales in the Classroom Climate Quality Analytic

Assessment Instrument (CCAI): (a) discipline environment; (b) student interactions; (c) learning/assessment; and (d) attitude and culture.

Significance of the Study

This study builds significantly on the limited literature that sex differences in single-sex schools mitigate disruptive classroom behavior. Several single-sex educational studies address outcomes related to school achievement and career attainment. Furthermore, most studies conducted concerning single-sex education include students that were admitted by lottery or not randomly assigned, whereas the two schools chosen in this study are students projected to attend this school based on their address.

Mainsfield (2013) interviewed state and local stakeholders of the Centro Urbano Independent School District. He highlighted that stakeholders believed single-sex schools provide alternative learning environments for students struggling to meet state standards. The stakeholders also mentioned the need to provide choice to parents as well as using single-sex schools to compete with private schools in the area. Many stakeholders saw the school as a viable social justice tool to reverse past experiences with discrimination and lack of opportunity. This study relates to a study in the Centro Urbano Independent School District which adopted single-sex schooling to “turn around” existing unsuccessful schools in their disadvantaged communities (Salomone, 2013).

Additional single-sex education research that included discipline referral data, Ferrara (2005) found that students in single-sex classes were referred for administrative discipline less often than students in coeducational classes. In a northeastern state in which this three-year experiment took place, the school district allowed parents to have the choice to place their child in single or mixed gender classrooms. Data collected during the first year were largely focused

on student performance which was positive, but other unintended benefits included students in the single-gender classrooms had improved attendance as compared to their attendance the previous year and the behavior referrals in single-gender classrooms decreased, most notably in the male classrooms. It has been recognized that student suspensions during 6th grade forecast future suspensions in 7th and 8th grade (Wald & Losen, 2003) and suspensions have been revealed to be a modest to strong predictor of dropping out of school (Skiba & Peterson, 1999).

Morris (2012) emphasized that African American girls characterize the fastest growing group of the juvenile justice system and they have undergone the greatest surge in middle school suspension rates in recent years. Given the connection between school discipline and other negative outcomes such as high school drop-outs, low-wage earning, and the possibility of incarceration, discipline in schools for African American girls and alternative school reform such as single-sex schools should be an increasing research priority. Based on the empirical literature, single-sex education is associated with improved behavioral performance in students, but few large-scale studies report the advantages of single-sex schools versus co-educational schooling to improve disproportionalities in the discipline referral rate of African American girls. Findings may show that African American female students in single-sex schools can address the disparities and lack of support to help African American girls be successful.

Research Questions

RQ1: What is the association between the number of office discipline referrals in a single-sex versus co-educational school setting for African American middle school girls?

RQ2: How do African American girls perceive the discipline environment in two different instructional setting (single-sex and co-educational setting)?

RQ3: How do African American girls perceive student interactions in two different instructional setting (single-sex and co-educational setting)?

RQ4: How do African American girls perceive learning and assessments in two different instructional setting (single-sex and co-educational setting)?

RQ5: How do African American girls perceive attitude and cultures in two different instructional setting (single-sex and co-educational setting)?

Null Hypotheses

The following are the null hypotheses:

H₀₁: There will be no statistically significant association between the numbers of discipline referrals and educational setting (single-sex vs. co-educational).

H₀₂: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on the discipline environment in two different instructional setting (single-sex and co-educational setting).

H₀₃: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on student interactions in two different instructional setting (single-sex and co-educational setting).

H₀₄: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on learning and assessment in two different instructional setting (single-sex and co-educational setting).

H₀₅: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on attitude and culture, in two different instructional setting (single-sex and co-educational setting).

Identification of Variables

Data collected for this study included the number of office discipline referrals written at both a Single-sex middle school and a non-single-sex middle school for identified sub-groups. These data were collected for one year from both schools. Student demographic variables included gender, and race at each of the identified schools. To support the first hypothesis in this study, the independent categorical variable is the number of referrals received by the African American middle school girls. The two independent categorical variables in this study is the type of educational setting (single-sex middle school vs. co-educational) in northeast Florida.

To support the next four hypotheses, the independent variable is the groups of African American girls in a single-sex and co-educational public middle school located in northeast Florida. The four dependent variables in this study are the four subscales in the Classroom Climate Quality Analytic Assessment Instrument: (a) discipline environment; (b) student interactions; (c) learning/assessment; and (d) attitude and culture.

Definitions

1. *Coeducational* [CE] – Coeducational (traditional) classrooms are heterogeneous classroom environments in which students from both genders are given instruction at the same time (Protheroe, 2009).
2. *Colorism* - defined as bias based on the lightness or darkness of a person's skin color (Russell, Wilson & Hall, 1992).
3. *Critical Race Theory* - CRT focuses theoretical attention on race and how racism is deeply embedded within the framework of American society (Parker & Lynn, 2002).
4. *Disciplinary disproportionality* - is the term used to describe the inequitable distribution of

disciplinary actions in schools (Wallace et al, 2008).

5. *Office discipline referrals* (ODRs) - have been defined as events in which a staff member observes a student violating a school rule and submits documentation of the event to the administrative leadership, who then delivers a consequence to the student (Irvin et al., 2006).
6. *Peer Victimization* - Is when a child is the target of negative actions from her/his peers) and gender identity Drury, Bukowski, Velásquez, & Stella-Lopez, L. (2013).
7. *School Climate* - School climate has been defined by Cohen, Pickeral & Frege (2009) as the character and quality of life within a school and refers not only to the physical environment but also to the whole school experience.
8. *Schoolwide positive behavioral supports* (SWPBS) - are schoolwide systems to communicate and teach rules (and reward students for following them) and function-based behavioral interventions (Center on Positive Behavioral Interventions and Supports, 2004).
9. *Single-sex schools*- Single-sex education refers to educational settings in which male and female students attend classes or schools exclusively with members of their own sex (Bond, et al, 2013).
10. *Single-gender classrooms* are homogeneous classroom environments in which students of one gender (all boys or all girls) are educated simultaneously (NASSPE, 2011).
11. *Social learning theory* - new patterns of behavior can be acquired through direct experience of observing the behaviors of others (Bandura, 1977).

Assumptions

This study seeks to determine the association of single-sex schools and the number of discipline referrals and the level of offense. The assumptions considered in this study are the

number of referrals and the severity of level of offenses will decrease in a single-sex school setting. It also assumes single-sex schools and co-educational schools have the same school climate that consist of students' experiences of school life and reflects the norms, aims, morals, personal relationships, teaching and learning experiences, and school make-up. Finally, it was assumed that the office discipline referrals documented in the district's database had been recorded accurately and consistently among all the selected schools.

Limitations

Due to the use of archival data, the consistency of teacher referral submissions and entry of the ODRs in the school wide information system cannot be validated for the schools used in this study. Another limitation could be that the data for this study was limited to a one year period, 2015-2016. Additionally, Riordan et al. (2008) states that without being able to randomly assign participants in a single-sex research study, the researcher cannot address possible variables which might bias research findings such as: the motivational level of students, family background, the quality and motivation of teachers and school climate.

CHAPTER TWO: LITERATURE REVIEW

Introduction

In 2006, the Department of Education determined that public schools could group students by gender if the education for students of both sexes is “substantially equal” or nondiscriminatory (U.S. Department of Education (USDOE), 2006). Many experts on the subject give reason for single-sex schools. “In the United States, part of the rationale for single-sex schooling is the view that adolescents create a culture in school that is at odds with academic performance and achievement” (Herr & Arms, 2004, p. 531). Educators have attempted to address the variety of educational ills through reform models. One reform model, single-sex schools, authorized by Title IX seems to address the needs of students who have not historically been successful in traditional coeducational schools, specifically low income and minority students.

Schools that serve female students have been in existence, but single-sex institutions have historically been found primarily in the private sector (Cable & Spradlin, 2008). Single-sex education is an avenue:

- to increase the enrollment of girls in classes they often avoid in coeducational settings;
- to adjust and improve self-concept and self-esteem in girls;
- to decrease “distractions” that usually occur in coeducational classes once students reach puberty;
- to better control the behavior of boys;
- to increase the achievement of at-risk students of both sexes;

- to reduce or remove sex-based stereotypes and achieve gender equity in classrooms; and
- to improve educational outcomes by paying attention to pedagogically significant gender differences, especially in brain function, (Bracey, 2006)

Belfi, Goos, De Fraine, and Van Damme (2012) found single-sex education to be more favorable for adolescent girls than coeducational environments in producing “non-achievement outcomes” such as school well-being and academic concept. Single-sex schools and classrooms are also recognized with having a positive outcome on discipline and decreased dropout rates (Chadwell, 2010). Throughout this review the term single-sex schools is defined as an educational setting in which male and female students attend classes or schools exclusively with members of their own sex (Bond et al., 2013) and used interchangeably with single-gender classrooms defined as homogeneous classroom environments in which students of one gender (all boys or all girls) are educated simultaneously (National Association for Single Sex Public Education (NASSPE), 2011).

Theoretical Framework

Critical Race Theory

Critical Race Theory (CRT) began as a movement in the legal arena which revealed how the law was originally written with the interest of certain populations, primarily Caucasian, upper class males (Delgado and Stefancic, 2001). It has crossed over in other disciplines such as: education, social service, humanities and psychology. CRT focuses attention on race and how racism is deeply embedded within the framework of American society (Parker & Lynn, 2002). Solórzano and Yosso (2002) echo that same sentiment, by stating that a critical race methodology creates opportunities to conduct research grounded specifically in the experiences

and knowledge of people of color. They explain how to use people's stories as theoretical, methodological, and pedagogical tools to challenge racism, sexism, and classism and promote efforts to achieve social justice. CRT theorists seek to expose the way in which racial inequality is maintained through the operation of structures and assumptions that appear normal and unremarkable (Rollack & Gillborn, 2011).

CRT is considered a formidable approach for conducting educational research on the cultural experiences of students of color because it recognizes that race and racism in educational organizations and honors the experiences of people of color in those organizations. (Ladson-Billings, 2009). CRT researchers have illustrated five principles to guide research and inquiry on educational equity and racial justice:

- Centrality of race and racism - All CRT research within education must centralize race and racism, including intersections with other forms of subordination such as gender, class, and citizenship.
- Challenging the dominant perspective - CRT research works to challenge dominant narratives and re-center marginalized perspectives.
- Commitment to social justice - CRT research must always be motivated by a social justice agenda.
- Valuing experiential knowledge - CRT builds on the oral traditions of many indigenous communities of color around the world. CRT research centers the narratives of people of color when attempting to understand social inequality.
- Being interdisciplinary - scholars believe that the world is multidimensional, and similarly, research about the world should reflect multiple perspectives. (Solórzano & Bernal, 2001)

CRT has been identified as a movement of “a collection of activists and scholars interested in studying and transforming the relationship among race, racism, and power” (Delgado & Stefaniec, 2001, p. 2). Since the recognition of CRT in the field of education, it has become a methodological, conceptual, and theoretical construct that seeks to disrupt race and racism in educational theory and practice (Solórzano, 1998). CRT highlights the questions and hardships student of color may have concerning their educational experiences. In addition, CRT calls educational leaders to recognize the prevalence of racism within themselves and our nation’s schools and be a catalyst for change (Capper, 2015).

The Social Learning Theory

One theoretical framework related to same-sex classrooms stems from the Social Learning Theory. This theory focuses on the behavior that people foster in response to their surroundings. Social learning theory is one theoretical framework which is applicable for evaluating social perceptions regarding how people form impressions and make inferences about other people and how they react to other people when observing them. Per Bandura (1986), children’s acquisition of suitable behavior ensues from their exposure to competent role models that display appropriate behavior in so living problems and coping with their world. Bandura found that “children patterned their behavior more after same sex than they did after other sex models; this occurs irrespective of children’s level of gender consistency” (Bandura & Bussey, 2004, p. 362). Albert Bandura’s explanation of social learning emphasizes how observing and mirroring other people and their behaviors as well as attitudes and reactions is pertinent in the learning process. Social Learning Theory emphasizes that one’s learning and performance of behaviors are influenced by one’s social contexts, including the family, community and broader society (Crosbie-Burnet & Lewis, 1993).

There have been numerous studies of the social learning theory as it relates to behavior. The two main areas of social learning theory research explore how associations with family and friends impact behavior. Social learning has been associated with girls not willing to take risk in co-educational studies. Booth & Nolen (2012) believe that when women are placed in an all-female environment where they are not reminded of their gender identity they lose a culturally driven belief that avoiding risk is “appropriate” female behavior.” This has been found to reflect “social learning” rather than “inherent gender traits.” There has been a link in the social learning theory to teach citizenship. The belief is that good citizenship can be learned, not from a formal curriculum but instead through positive experiences of active involvement within society (Benn, 2000). Social Learning Theory has also been applied to the explanation of aggressive behavior, specifically how it applies to behavior modification (Bandura, 1973). Clingempeel and Henggeler (2003), in a study of aggressive juvenile offenders transitioning into adulthood, found that the quality of the relationships the young people had with others was significantly related to their desistence or persistence in criminal conduct.

Parent, teacher and other positive role models must display appropriate behaviors. Teachers should also expose students to a variety of other models to increase their confidence (Cunia, 2007). There are three principles that help define Social Learning Theory described by Novak & Pelaez (2004):

1. Observational learning is achieved when the modeled behavior is structured or organized and then rehearsed symbolically, and then overtly enacted. Retention of that behavior occurs when the modeled behavior is coded into words, labels or images.

2. The adoption of the modeled behavior is strengthened when the outcomes of that behavior are valued, seen as important to the individual or lead to desirable and expected outcome.
3. The modeled behavior is more likely to be integrated by the observer when the model has characteristics like the observer, there is a cognitive-behavioral connection with the model, the model is admired by the observer, and the behavior that is adopted has practical or functional value.

Since the Social learning theory explains human behavior in terms of constant mutual interaction between cognitive, behavioral, and environmental influences, it is conceivable that the boys and girls in single-gender classes will have more opportunity to observe their peers of the same gender that are excelling in class, and then model that behavior.

Literature Review

History of All Girls Education

Single-sex schools is not a new educational model. Single-sex public education arose in colonial America when males were educated in the basics of reading, writing and arithmetic to groom them for secondary school while females were generally uneducated, or given informal instruction in reading and writing at “dame schools” (Friend & Friend, 2007). In the 1800s the single-gender seminary or academy was established with the primary function of providing moral and domestic education to girls (Riordan, 1990). The Catholic Church also played a great role in educating girls in the 1800s due to the need for teachers to educate girls (Riordan, 1990). They helped spread girl’s primary school throughout the United States. All girls, regardless of race and academics were required to take domestic or home economics which eventually lead to secretarial, nursing, and teaching or motherhood career tracks, even if you were academically

advanced (Sadker & Sadker, 1995; Tyack & Hansot, 1990). Even though women's roles in society expanded, girls were still steered in occupational roles such as secretarial, nursing, teaching, or motherhood (Sadker & Sadker, 1995). In 1918, arguments made by the Commission on the Reorganization of Secondary Education created two-tracks for students: one for males, where school was geared toward college prep and the other track for vocational training.

Eventually, the first female colleges in the United States: Georgia Female College, Mount Holyoke Seminary, and Elmira Female College were founded (Astin & Hirsch, 1978).

Although, not always equal, co-educational settings began to arise in the United States at the beginning of the 20th century. In 1972, through the passage of Title IX, it became illegal to discriminate in any public schools or activities receiving federal funds based on sex (Education Amendments of 1972). An additional act was passed, the Women's Educational Equity Act (WEEA) in 1974, which covered: inadequate enrollment of girls in math and science courses, gender stereotyping in the curricula, providing equity in educational institutions, Title IX implementation, equity of disabled women and girls, and unfair educational practices in diverse school districts (Simonson, & Menzer. (1984). Although much legislation has passed to provide women access to the same educational opportunities as men, there is a need for single-sex schools to give girls the leverage in male dominated fields such as science and engineering.

Single-Sex School Policy

Single-sex schooling has been established throughout U.S. history (Shmurak, 1998). Single-sex classrooms are designed to address the academic and social needs of students based on their gender differences. Due to uneconomical reasons (Riordan, 2002) and legislations, Title IX of the Education Act Amendments of 1972 (now the Patsy T. Mink Equal Opportunity in Education Act), public single-sex education was mostly abandoned in the U.S. (Levin, 2007). This

education act stated, “No person in the United States shall, based on sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance” (Education Amendments of 1972). While Title IX did not utterly exclude single-sex educational reform, it regulated the circumstances under which male and female students could be segregated within public education settings (Riordan et al., 2008).

In 2006, the USDOE regulations were reinterpreted to allow single-sex classes in coeducational schools under limited circumstances without violating Title IX (USDOE, Press release, 2006). The provision required that such single-sex classes must be “substantially related” to the achievement of an important governmental or educational objective. Even though school districts have been given the green light to offer same-sex classrooms, districts must ensure they meet new regulations required by a provision in the No Child Left Behind Act (NCLB), a provision intended by its authors to legalize single-sex education in public schools (specifically, sections 5131(a) (23) and 5131(c) of the NCLB). The new regulations allow coeducational public schools (elementary and secondary schools) to offer single-sex classrooms, if the schools:

- Provide a rationale for offering a single-gender class in that subject. A variety of rationales are acceptable, e.g. if very few girls have taken computer science in the past, the school could offer a girls-only computer science class.
- Provide a coeducational class in the same subject at a geographically accessible location. That location may be at the same school, but the school or school district may also elect to offer the coeducational alternative at a different school that is geographically

accessible. The term “geographically accessible” is not explicitly defined in the regulations.

- Conduct a review every two years to determine whether single-sex classes are still necessary to remedy whatever inequity prompted the school to offer the single-sex class in the first place.

In December, 2014, due to the recurring inquiries about the legality of single-sex classes, the USDOEs Office for Civil Rights (OCR) released new guidelines to explain the 2006 regulations for K-12 schools that offer or want to offer single-sex classes on how they can provide boys-only or girls-only instruction while remaining in compliance with civil rights laws.

To offer single-sex classes or extracurricular activities, schools must:

- Identify an important objective that they seek to achieve by offering a single-sex class (such as improving academic achievement);
- Demonstrate that the single-sex nature of the class is substantially related to achieving that objective;
- Ensure that enrollment in the single-sex class is completely voluntary (through an opt-in, rather than an opt-out, process);
- Offer a substantially equal coed class in the same subject;
- Offer single-sex classes evenhandedly to male and female students;
- Avoid relying on gender stereotypes;
- Provide equitable access to single-sex classes to students with disabilities and English language learners and,
- Avoid discriminating against faculty members based on gender when assigning educators to single-sex classrooms (USDOEOCR, 2014).

The National Association for Single Sex Public Education (2011) estimates that as of the 2011–2012 school year, 116 public schools in the United States were single sex and an additional 390 were offering single-sex educational opportunities. The most distinguished single-sex schools in the country that serve minority students include: Eagle Academy for Young Men, East Harlem’s Young Women’s Leadership School, and Chicago’s Urban Prep Charter Academy for Young Men (Bigler, & Signorella, 2011).

Reason for Single Sex Schools

Although much research has been conducted concerning single-sex schooling and academic achievement, it has also been established as an important vehicle to resolution for other concerns like, discipline problems, self-esteem, and drop-out rates. Advocators of single-sex schools contend the basis of single-sex education is two-pronged. They maintain that (1) each sex has unique biological and developmental needs and (2) students grouped by sex will perform better without the distractions and social pressures of the other sex present (Bond et al., 2013). Riordan’s (2002) theoretical rationale suggests that there are twelve potential positive effects of single-gender schools:

- The reduced strength of youth cultural morals;
- More order and control;
- The delivery of more successful role models
- A reduction of sex differences in curriculum and opportunities;
- A decline of sex bias in teacher-student interaction;
- A reduction of sex stereotypes in peer interaction;
- The offer of a greater number of leadership opportunities;
- Single-gender schools require a pro-academic parent/student choice;

- Smaller school size;
- A core curriculum emphasizing academic subjects taken by all students (organization of the curriculum);
- Positive relationships among teachers, parents, and students that lead to a shared value community with an emphasis on academics and equity (school social organization);
- Active and constructivist teaching and learning (organization of instruction). (Riordan 2002, p. 19).

Advocates of single-sex schools have maintained that disrupted behavior and discipline problems are mitigated in single-sex classrooms (Matthews, Ponitz, & Morrison, 2009). Furthermore, single-sex education proponents found teachers encountered fewer discipline problems and classroom distractions were lessened in the single-gender classroom (Gurian, Stevens, & Daniels, 2009) Disruptions and discipline problems take up instructional time and there is good evidence to suggest that these disruptive behaviors lead to suspension. Research examining individual risk factors for discipline referrals and sanctions suggest that physical aggression is a significant predictor of school removal and discipline referrals for girls as well as boys (Farmer, Goforth, Leung, Clemmer & Thompson, 2004).

Proponents of single-sex school have also argued that many girls fail to thrive in co-educational settings often because of their tendency to be passive, difficult, quiet, and cooperative rather than assertive, confident, loud, and competitive in the classroom (Chadwell, 2010a). Sax (2010) identified three benefits of single-gender classrooms for girls: (a) opportunities to study nontraditional subjects; (b) teaching practices and strategies personalized to their needs; and (c) environments that foster self-confidence and self-esteem. Lavy and Schlosser (2011) conducted a study to show the effects and mechanisms of gender peer effects in

elementary, middle, and high schools. Their report showed classrooms with a higher level of female students had a lower level of classroom violence and better relationships with other students and teachers. The improved classroom environment appeared to come from a change in the classroom composition (all female classrooms) and not from changes in students' individual behavior or in their study effort.

The promotion of single-sex education has often been associated with the beliefs of brain differences in boys and girls (Gurian and Henly, 2001). Advocates of single-sex public education argue that boys and girls learn differently due to brain anatomy and function (Sax, 2005). Male brains are undoubtedly larger than female brains (Paus, 2010), which is comparable to the differences in gender height, weight and mass of other organs (Sarikouch et al., 2010) as well as research has found that brain growth is completed earlier in girls neither which is linked to learning (Lenroot et al., 2007). Jackson (2010) believes a lot of the brain research on gender differences have been prone to misinterpretation and is more consistent with brain plasticity; changes in the brain that occur when we learn new things or memorize new information. Eliot adds the views concerning brain differences in children have more to do with teacher expectations rather than the differences in gender (2011).

Okoye-Johnson (2008) suggests that single-gender education is potentially a powerful resource in the "Black Civil Rights Agenda," as many emerging public single-gender schools aim to serve high-poverty, 'at-risk,' ethnically and racially diverse student populations. In a study that included only girls, Drury et al. (2012) also found lower levels of peer victimization (i.e., when a child is the target of negative actions from her/his peers) and gender identity in the single-sex settings. Single gender schooling is not a new experience for African American students (Salomone, 2003). According to Salomone:

The notion of using separate schooling to promote self-esteem and the economic and social welfare of African American students harkens back to the establishment of separate schools for girls in the early 1900s. The Daytona Literary and Industrial School for Negro Girls, founded in Daytona Beach Florida in 1904 by Mary McLeod Bethune and the National Training School for Negro Girls, founded by Nannie Helen Burroughs in Washington, D.C. in 1909 were the most noteworthy examples of that movement.

These historical initiatives shared with their contemporary counterparts a belief in gender specific conduct and instruction. (Salomone, 2003, p. 133).

Simon (2013), examined data that were gathered from an economically disadvantaged Title I federally assisted upper elementary school with respect to the implementation of single-gender classrooms. The study was directed by the following two research questions: First, what were the perspectives from teachers, students, and parents with the initial year of implementation of single-gender classrooms? Second, what school level data could be analyzed and summarized with respect to student behaviors during the initial year of implementation? An open-ended survey was used as the instrument to collect data during the 2008-2009 school years. Data was collected from teachers, students, and parents concerning their viewpoint with the initial year of implementing single-gender classrooms and their desire to have single-gender classrooms in their elementary school. The results from this study showed that teachers and parents considered single-gender classrooms provided a positive learning environment for students. Teachers, students, and parents highlighted that single-gender classrooms allowed students to be more productive, removed the largest distractions for male and female students, and allowed them to concentrate on their schoolwork. In addition, the data revealed that single-gender classrooms had a positive impact on girls as viewed by teachers, female students, and parents of female

students in terms of feeling comfortable enough to ask questions when they did not understand something.

Gurian and Henley (2001), observed advantages for girls include extracurricular activities, academic performance, educational aspirations and less discipline problems. Riordan (1990) suggests that boys, as well as girls, have fewer discipline problems in single-sex schools compared to co-educational settings by reducing the influence of adolescent culture. It is also advantageous for schools to choose to implement single-sex classroom at the middle school level, by doing so it minimizes the social, emotional and romantic distractions that naturally occur in adolescence (Gurian et al., 2009). Bracey (2006) provided additional reasons for implementing single-sex educational programs, including: (a) improving girl's self-esteem, confidence, and leadership skills; (b) increasing attention to pedagogically significant gender differences, particularly those found through brain research, and (c) controlling the behavior of boys. It has been indicated at the end of the first year of middle school for girls, attending a single-sex school out performed those girls attending coeducational schools, even when student-driven section bias was controlled (Haye, Pahlke and Bigler (2010).

Arguments against Single-Sex Schools

The debate over single-sex classrooms has been controversial and research results have been mixed. There has been substantial research worldwide whether single-sex schooling produces academic and social benefits for girls or boys. Research on single-sex education is divided, with no definitive argument to compel the justification of their existence or to dismiss their utility as an alternative educational option. There is evidence that sex segregation increases gender divisions among children, according to Haplem et al. (2011). He believes, "Separating boys and girls in public school classrooms makes gender very salient, and this salience reinforces

stereotypes and sexism” (Haplern et al., 2011, p. 1707). Researchers who disagree with single-sex education contend that single-sex schools are harmful because they lessen opportunities for cross-gender interaction, (Balkin 2002).

Segregating males and females in separate classrooms is only one facet of the learning environment. Opponents of single-sex education argue that coeducational environments are beneficial because they typically promote tolerance and cooperation across sexes, thereby reducing sex discrepancies in academic attitudes and behaviors (Elliot, 2009). The National Coalition for Women and Girls in Education (2012) also expressed opposition to single-sex education and wrote, there is no evidence that single-sex education in general works or is better than co-educational and the elements that enable children to succeed in single-sex education can be replicated in coeducational settings. These elements include a focus on core academics, small class size, qualified teachers, sufficient funding, and parental involvement.

Goodkind (2013) conducted a research project exploring students’ and other stakeholders’ perceptions and experiences of single-sex public education in the newly configured Pittsburgh school. Conversations with youth workers revealed one young man wondering, “Are they trying to turn us gay?” A young woman discussed her sense that segregation by sex was a punishment that laid the blame for educational problems on the students rather than on the lack of resources and teachers who do not seem to care (Goodkind, 2013, p. 394). Haplern et al. (2011) argued that sex separation, leads to gender-stereotyped attitudes and is consequently harmful to students. These arguments were based on examples and research based on the negative effects of racially segregated schools on African American students, but historically, schools that were racially segregated were mandatory for African American students and stigmatized as inferior which was harmful to all who attended.

Although no conclusive studies to date have addressed bullying in single-sex versus coeducational environments, Spielhagen (2008) found that both boys and girls in seventh-grade single-sex classes in a small rural school felt that they were bullied more in a single-sex environment than when they were in coeducational classes. Gastic and Johnson (2013) argued single-sex schools with rigid and entrenched gender expectations and norms can be breeding grounds for gender-based bullying that functions to empower students to regulate (and punish) “deviant” gender and gender expression. Cost is also a factor in implementing single-sex school. Co-educational settings in schools is more cost effective than having separate schools based on gender (Lee & Bryk, 1986). The creation of single-sex programming is typically costly in both time and money because it requires at least some separate physical spaces and schedules for male and female students (Signorella & Bigler, 2013).

Academic Achievement and Single-Sex Schooling

The debate if single-sex classrooms have a positive impact on academic achievement has been controversial and research results have been mixed. There has been significant research and policy consideration if single-sex schools improve academic achievements for girls or boys (Lee & Bryk, 1986; Goodkind, 2013; Hays et al., 2010). Research on single-sex education is divided, with no definitive argument to compel the justification of their existence or to dismiss their utility as an alternative educational option. According to Sax (2005), single-sex classrooms where gender differences are appropriately considered have promise in fostering achievement for both boys and girls. A prevailing hypothesis among advocates of single-sex education is that it impacts achievement as it alleviates students from perceived conflict, pressures, tensions, and temptations (Riordan, 2004). Riordan also suggests that the beneficial effects of academic

achievement of single-sex schools are greatest among certain groups such as African American or Hispanic females from low socioeconomic backgrounds (Riordan, 2004).

There are numerous probable reasons for the gender differences in academic performance; some of the explanations explored are gender differences in competitiveness, the role of students' self-perception, and peer-group outcomes. Much of the literature ascertains that men are predominately more eager to compete than women (Gupta, Poulsen, & Villeval, 2005; Niederle & Vesterlund, 2007). Booth and Nolen (2009a; 2009b) examine if gender composition in public single-sex and co-educational schools influenced female student competitive behavior. Their study revealed girls from single-sex schools were just as competitive to boys compared to the girls attending co-educational schools.

Else-Quest and Peterca (2015) compared 11th-grade low-income students of color enrolled in nonselective, urban neighborhood public single-sex and mixed-sex high schools. Evidence showed that girls enrolled in the single-sex school achieved higher standardized test scores in math, science, reading, and writing (Else-Quest & Peterca, 2015). Dwarte (2014) evaluated to what degree the restructuring of a coeducation school to a single-sex school would impact the reading achievement for African American students. After the data were analyzed from the school years prior to the transformation and the five years following the restructuring to single-sex education, achievement was at its lowest on the Pennsylvania System of School Assessment (PSSA) with a mean score of 1070. Reading achievement for African American males increased steadily from its lowest point 1070, at the inception of single-sex schools to a mean high of 1236 by year 5 of the restructuring to a single-sex school. For females, the results were also positive. Reading achievement for female students rose from a mean score of 1197 on the PSSA during the school's composition as a coeducational school to a mean of 1356 during

the years of transforming to a single-sex school. There have even been studies that shows positive outcomes from attending single-sex settings that far reach high school (Dwarte, 2014). Sax (2009) analyzes the U.S. Freshman Survey and reported that female graduates of single-sex high schools had higher academic engagement and confidence in their mathematics and computer skills.

Single-Sex Schools and School Climate

Positive school climate has been found to be correlated with decreased levels of student misbehavior and discipline problems (Welsh, 2003). School climate has often been described as the “quality and character of school life,” including both social and physical aspects of the school, that can positively promote behavior, school achievement, and the social and emotional development of students (Lester & Cross, 2015). The National School Climate Council (2007) recommends that a positive and sustained school climate can be defined in the following ways:

- School climate is based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures.
- A sustainable, positive school climate fosters youth development and learning necessary for a productive, contributive, and satisfying life in a democratic society. This climate includes norms, values, and expectations that support people feeling socially, emotionally and physically safe. People are engaged and respected. Students, families and educators work together to develop, live, and contribute to a shared school vision. Educators model and nurture an attitude that emphasizes the benefits of, and satisfaction from, learning. Each person contributes to the operations of the school as well as the care of the physical environment (National School Climate Council, 2007, p. 4).

School climate is one of the most complex and important concepts in education. The classroom and school climate contributes to student academic performance as well as being the most important influence for identifying behavior path of a classroom. Five common school climate domains have been identified as: order, safety, and discipline; academic outcomes; social relationships; school facilities; and school connectedness (Zullig, Koopman, Patton, & Ubbes, 2010). There is evidence that a positive school culture is associated with high levels of student achievement and lower rates of suspension and expulsion (Voight, Hanson, O'Malley, & Adekanye, 2015).

One of the arguments for exclusionary school discipline has been that it would improve school climate: If students who misbehave are removed, the climate will be better for the rest of the students. However, researchers have found that such measures hurt school climate (APA, 2008). Additionally, Syvertsen, Flanagan and Stout (2009) describe that middle school students who sense their schools as having a positive school climate will be more likely to break "the code of silence" and report to an authority figure if they hear something dangerous is going to happen in the school.

Riordan (2002) found that both boys and girls who attended single-sex schooling options experienced a school culture strongly geared toward academic achievement and as such, students spent significantly more time on homework than students who attended co-ed schools. Gregory, Skiba, & Nogurera (2010) suggests that positive school climate is associated with reduced aggression and violence. Gurian and Henley (2001) asked teachers to discuss their experiences in single-sex classes and schools and were told that fewer discipline problems were evident.

For girls, single-sex schools would enhance school climate that is founded on rituals and routines. Salomone (2003) reported that single-gender classrooms provide a safe space for girls

because of the lack of ridicule and harassment that often occurs with boys in the room. Awareness of connection to school is one significant component of school climate (Skiba, Simmons, Peterson, McKelbey, Forde, & Gallini, 2004). In a single-sex school, that awareness and sense of connection is possibly associated with girls' freedom of stereotypes and same-gender bonding. Hubbard and Datnow (2005) describe how single-sex schools in California created environments where girls did not have to compete for boys' attention and many girls in these schools also noted that they no longer had to put up with harassment from boys in class (p.121). Baron, Bell, Corson, Kostina-Ritchey, and Frederick (2011) in a narrative analysis of an early adolescent identity project found in their discussions with girls who chose to attend an all-girl middle school reported girls enjoyed a learning environment free from the distractions offered by boys. School climate is exceptionally important to comprehend and support, as parents have options as to where to send their children to school, whether single-sex or co-educational. Patterson and Pahlke (2011) contend in single-sex schools, feelings of school connection are likely to be tied to students' beliefs about gender, including gender stereotype endorsement and the implications of stereotypes for the self.

African American Girls School Experience

The pursuit for equal access to education for both women and African-Americans has been extensive and challenging. Both groups have historically been depicted as academically inferior and ingenuous compared to Caucasian men (Boukari, 2005). According to the double jeopardy hypothesis, African American females face double marginalization given their relationship in two usually lower status social minority groups: women and African Americans, making them targets of both racism and sexism (Reid & Comas-Diaz, 1990). Some of the issues that still plague African American girls, despite landmarks cases such as *Brown vs. The Board of*

Education are access to highly qualified teachers, curriculum and technology, and adequate infrastructure (Kozol, 2005).

Rector (1982) argued that the women who have contributed significantly to the education and general welfare of African Americans in the Americas have been various religious groups, including Roman Catholic nuns. Some of the pioneers who helped shape the educational foundation and started schools especially for African American girls include: Nannie Helen Burroughs and Mary McLeod Bethune. Nannie Helen Burroughs with the help of the National Baptist Convention established a school for African American girls in Washington, D.C. in 1909 that focused on vocational training (Thomas & Jackson, 2007). Mary McLeod Bethune founded the Daytona Literary and Industrial School for Training Negro Girls in 1904. Once the school merged with the the all boy school, Cookman Institute of Collegiate of Jacksonville, Fl the school was renamed, the Bethune-Cookman Collegiate Institute (Thomas & Jackson, 2007).

“African American female students are more likely to encounter race, class, and gender discrimination in classrooms, curriculum, and pedagogy, which puts them at great risk of school failure” (Evans-Winters, 2005, p.17). African American students are subjected to learn in educational environments where content, teaching, school climate, and assessment are often racially harsh, restricted, and hinders school success (Ladson-Billings & Tate, 1995). Fordham (1993) suggest that both students and school personnel stereotype African American girls as loud, aggressive and masculine. Other stereotypes of African American girls consist of teachers perceiving African American girls as less attentive and more disruptive than their counterparts (Francis, 2012). The negative societal images and stereotypes have adversely affected the self-esteem and, consequently, the academic and emotional development of young African American females (Neal & Wilson, 1989).

For African American girls to be successful in school, they must learn to play both sides of the coin, have a school and home persona. This process of adjustment, called shifting, allows African American girls to obtain social acceptance by adapting their speech, behavior, and appearance to circumnavigate multiple environments (Jones and Shorter-Gooden, 2003). Fordham (1993) also suggests that African American girls take on this persona to be heard and not overlooked in classrooms and schools that normally would ignore them and disregard them as students. African American girls usually outnumber their male counterparts in schools that serve low-income families. Per Cochran-Smith and Zeichner (2010) this leaves African American girls left to fend for themselves in desegregated public urban and private school classrooms, with more than often Caucasian female middle-class teachers from family and economic backgrounds different from their own. Morris (2007) conducted a study that found that teachers perceived African American girls as being “loud, defiant, and precocious” and that African American girls were more likely than their Caucasian or Latina peers to be reprimanded for being “unladylike”. Morris (2007) also suggest that teachers focus more on the social interactions than on the academic progress of African American girls. He suggested many interactions between African American girls and teachers center on the girls’ attitudes and social appropriateness. Downey and Pribesh (2004) suggest that teachers rate African American students as exhibiting poorer classroom behavior, but this can be due to the teacher’s lack of understanding of African American students’ behavior.

It is not just discipline matters where African American girls are delineated; African American girls, particularly those from low-income communities, are historically underrepresented in mathematics and science related careers (National Science Foundation, 2011). School counselors and teachers have the responsibility of steering students into taking the

appropriate level courses, but Ogbu's (2003) study of school disengagement revealed that African American students believed counselors are reluctant to encourage or place them in honors or AP courses. This inhibits African American girls from being accepted in college. Hubbard (2005) found that African American girls reported that several school counselors (a) discouraged them from enrolling in advanced-level courses, (b) consistently gave them information for trade school and 2-year colleges, and (c) discouraged them from applying to notable colleges. Ogbu (2003) also cites teachers hold a more negative perception of African American students than of Caucasian students and addressing behavior problems, overshadowed counseling students about the importance of advanced course taking. Williams (2004) presented in a law review article that focused on the constructions of race and gender treated by single-sex education that most single-sex schools are prescribed for Caucasian girls to expose them to science and math and preserve their self-esteem, while they are recommended for African American girls to prevent them from becoming pregnant.

School Discipline

Gaustad (1992) defined school discipline as having two main purposes: a) ensuring the safety of those within the school, and b) creating an "environment conducive to learning." Discipline in schools should entail pupils' endeavoring to 'reach appropriate standards . . . in a valued activity' (Wilson, 1971, p. 79). A survey of educators and school law attorneys ranked student discipline as the third most important legal issue confronting educators after special education and student expression (Bon, Schimmel, Eckes, & Militello, 2008). According to Sisman and Turan (2004) acknowledged students do not deliberately come to school to misbehave, but act out due to physical, emotional, and behavioral conflicts caused by varying

factors (2004). Many of the behaviors that students bring to school are necessary to help them survive outside of school (Payne, 2005).

Schools' official codes of conduct stipulate to teachers, administration, psychologist, school resource officers, and other professionals responsible for managing discipline how the rules should be followed with integrity, professionalism, and legal trustworthiness (Hirschfield 2008). In most schools, formal discipline is managed by school administrators and in large urban districts, may even be handled by the district administration (Kafka, 2009). Schools normally respond to student discipline problems with actions and punishments such as office discipline referrals, corporal punishment, suspensions, and expulsions, but as Bear, Cavalier, & Manning (2005) suggests, school discipline entails more than punishment. It is complex and includes developing student self-discipline (Bear, Cavalier, & Manning, 2005). Students who demonstrate defiant behaviors at school are considered at risk of academic failure, delinquency, dropping out, gang membership and adult incarceration (Dunlap, 2006).

School discipline research indicates that throughout the United States, students of color, particularly African American and Latino youths, are more often disciplined in the form of referrals, suspensions, and expulsions, and are more often policed and arrested than their counterparts (Advancement Project, 2010). According to a report issued by the USDOE for Civil Rights (2014), African American youth make up 18 % of the student population; they constitute 42 % of the referrals to law enforcement, 35 % of school-related arrests, and 39 % of all students expelled (Losen & Gillespie, 2012). The use of punitive responses to student behaviors is especially prevalent in schools where principals and other school leaders who believe, erroneously, that "frequent punishments helped to improve behavior" (Losen & Gillespie, 2012, p. 39). The custom of suspending and expelling students for violating school rules is a widely use

of consequences for misbehaving. In the wake of the federal Gun-Free School Act of 1994 and the widely-publicized shooting that occurred at Columbine High School, schools have shifted to more punitive and restrictive disciplinary approaches (Kupchik, 2010). Even before zero tolerance, some groups, such as African American students, had more conflict-laden experiences with school discipline and control than did other student populations (Kafka, 2009).

The composition of a school significantly determines the suspension rates. Urban and inner-city schools tend to have higher rates of self-reported misbehavior than suburban, wealthy schools (Skiba, Rausch, & Ritter, 2004). Schools with higher free and reduced lunch rates have greater incidents of victimization, delinquency, and suspension (Raffaele-Mendez et al., 2003). Additionally, racial make-ups has been another school attribute related with higher suspension rates. For example, schools with higher percentages of African American students have higher rates of suspension (Raffaele Mendez et al., 2003). Hemphill et al., 2010, believes there are strong connections among high student suspension rates and schools situated within underprivileged neighborhoods. Lastly, schools with larger populations experience more student misbehavior and violence than smaller schools (Duke, 2002).

Single-sex schools may decrease school discipline problems facing schools by reducing the influence of adolescent culture, which often places emphasis on physical attractiveness and interpersonal relationships over academic activities (Riordan, 1990). There is evidence that single-sex education has positive effects on student interactions. The U.S. DOE (2008) review of the implementation of public single-sex schools revealed that “students in the single-sex elementary and middle schools visited displayed a greater sense of community, interacted more positively with one another, showed greater respect for their teachers, were less likely to initiate

class disruptions, and demonstrated more positive student role modeling than students in the co-educational schools examined”.

Office discipline referrals. Tracking students off task and discipline behaviors has helped schools address and implement effective behavior strategies and support plans. Office discipline referrals (ODRs) have been defined as events in which a staff member observes a student violating a school rule and submits documentation of the event to the administrative leadership, who then delivers a consequence to the student (Irvin et al., 2006). ODRs, standardized records of events of problem behavior that occur in schools (Sugai, Sprague, Horner, & Walker, 2000), have the potential to provide school personnel with a systematic and observable index of student problem behavior that can be measured, compiled, and analyzed reliably across different contexts, students, and behavior. ODRs represent a systematic process with the following features: (a) a common form that details important information about the incident (e.g., location, time of day, others involved), (b) clear definitions of what behaviors warrant a referral, (c) clear definitions of what behaviors are expected to be handled without a referral, (d) regular training on use and discrimination between reportable and non-reportable behaviors, and (e) a system for compiling and analyzing ODR data (McIntosh, Brown, & Borgmeier, 2008).

Beyond their use as indicators of problem behavior at the school level, there are three common uses for ODRs in measurement of individual student behavior. First, ODRs have been used as part of a multisource approach to identify the operant function of problem behavior, a critical component for intervention selection McIntosh et al. (2008). Second, ODRs have been used as progress monitoring measures to determine response to intervention. There are several examples of the use of ODRs as a secondary measure of intervention effectiveness, particularly

for targeted Tier 2 interventions (McIntosh, Campbell, Carter, & Zumbo, 2009). Third, ODRs have been used as screening measures to identify students who require additional behavior support beyond universal interventions (Tobin & Sugai, 1999). Skiba et al., (2002) illustrate that much of the disproportionality in punishment can be explained in the referral process. Research using office discipline referrals to track behavior problems found that the behavior problems that result in ODRs in school are likely to persist into adulthood. Using discipline referrals and other school records to describe events and outcomes, Tobin & Sugai (1999) found that early in their school careers, both girls and boys with more discipline referrals than their peers were more likely to continue to have discipline problems later, were at elevated risk for identification as “emotionally disturbed” and restrictive placements, and were not likely to be on track for graduation when in high school.

ODRs can offer valuable information on school climate, specifically if the data are comprehensive. ODRs can contribute information on the number of students referred for discipline; whether any one subgroup is disproportionately referred for discipline, suspended, or expelled; and if frequent offenders may benefit from more intensive support or intervention. Student discipline records also can supply data about which rules are most frequently violated and which teachers most frequently refer students (Center for Comprehensive School Reform and Improvement, 2009). These data can enlighten and identify class research-based strategies to improve the school climate.

Disproportionality in school discipline. Disciplinary disproportionality is the term used to describe the inequitable distribution of disciplinary actions in schools (Wallace et al., 2008). Gregory et al. (2010) call the disproportionality of discipline the “racial discipline gap.” Schools usually respond to disruptive behavior with punishment that consists of office discipline

referrals, suspensions and expulsions. Figures released by the Department of Education for the 2011–2012 school year disclosed that while African American males were suspended more than three times as often as their Caucasian counterparts, African American girls were suspended six times as often (USDOE, 2012). Disproportionality of discipline for African American girls does not just start in middle school, it starts in elementary and continues throughout high school. Raffaele-Mendez and Knoff (2003) indicated that African American girls received higher suspension rates in comparison to Caucasian and Hispanic girls across primary and secondary school. Blake et al., (2010) have found that African American students are sent to the office for less serious and more subjective reasons as well. When African American girls are suspended, or expelled it affects them far beyond the school wall, most often repeated suspension and expulsions lead to them dropping out of school are being involved with the juvenile justice system. Research shows that frequent suspensions appear to significantly increase the risk of academic underperformance (Davis & Jordan, 1994). Failure to deal effectively with this low-level aggressive behavior contributes to poor individual, school, and community outcomes (Conoley & Goldstein, 2004).

Skiba, Simmons, Staudinger, Rausch, Dow, and Feggins (2003) also suggest a positive relationship between school suspension and youth incarceration. The school-to-prison pipeline analogy has become the dominant frame by which to discuss the lived disproportionately experiences of African American boys and girls who are criminalized in their learning environments, ultimately leading to contacts with juvenile and criminal justice systems (Edelman, 2007). According to the Advancement Project (2010), “arrests in school represent the most direct route into the school-to-prison pipeline, but out-of-school suspensions, expulsions,

and referrals to alternative schools also push students out of school and closer to a future in the juvenile and criminal justice systems” (p. 4-5).

Research suggests the disparities exist due to teacher referral bias rather than students’ actual behavior. It is associated with disproportionate discipline sanctions and referrals (Skiba et al., 2002). In this research, Skiba, et al., (2002) reviewed different findings for disproportionate depictions based on gender, race, and socio-economic status of suspension and referrals. First, racial and gender discrepancies in school disciplinary results were more consistent than based on socioeconomic disparities. Secondly, they found no evidence that racial disparities disappeared when controlling for poverty status. Finally, the disproportionate rates of office referrals and suspensions for boys were due to increased rates of misbehavior, but no support was found for that of African American students who act out more than other students, but were referred to the office for less serious and more biased reasons (Skiba et al., 2002).

Raffaele-Mendez and Knoff (2003) reported that African American girls were more likely to be referred for defiance, disruptive behavior, disrespect, profanity, and fighting relative to their racial-ethnic representation in the school district. Other factors that lead to discipline disproportionality can be attributed to the novice teachers’ lack of cultural awareness, teacher inexperience, and lack of cultural synchrony between teacher and students, and the lack of classroom behavior management skills (Fenning & Rose, 2007). Research shows that African American females receive more discipline infractions because they misbehave in ways that lead to classroom disruptions that warrant office discipline referrals (Estell, Farmer, Pearl, Van Acker, & Rodkin, 2008).

As a consequence of systemic race and gender discrimination, African American girls are often stereotyped before they even start school, and this affects their self-perceptions and self-esteem as well as the perceptions of their teachers (National Womens' Law Center, NAACP Legal Defense & Education Center, 2014). Stereotypes of African American girls and women date back to slavery—such as the view that African American women are “angry” or “aggressive,” and “promiscuous” or “hyper-sexualized” (Harris-Perry, 2011). These opinions can shape teachers' and administrators' beliefs about students, condemning students before they even have a chance to commit an infraction. Blake, Butler, Lewis & Darensbourg (2011), believe failure to conform to gender stereotypes may also be the basis for disproportionately disciplining African American girls for physical fights, as losing control and visibly or even physically expressing anger defies stereotypes about what is “ladylike.

Even within the African American student population there are disparities. The color-shade of your skin also makes a difference. Researchers at Villanova University found a connection between race, skin color, gender, and school suspension. They found that darker skin African American students had a greater likelihood of being suspended than lighter skin African American students. After analyzing the data further, they also found that even though boys with darker skin were suspended more than girls, the impact was greater on African American girls. This phenomenon is recognized as Colorism which is the process of discrimination that privileges light-skinned people of color over their dark-skinned counterparts (Hunter 2005). Researchers who have studied the theory of colorism state that colorism extends far beyond skin tone, but also facial features and the texture and style of one's hair (Caldwell, 1991).

Impact of student misconduct on academic achievement. It is the school's responsibility to provide a safe learning environment where students can learn. The connection

between student behavior problems and poor academic achievement has been cited, especially when students are removed from the classroom for suspension (Lopes, 2005). When classroom disruptions, violence and confusion pervade the classroom, teachers and school administrators become less effective (Thompson and Walters, 1998). Disciplinary problems affect academic achievement in several respects; it affects teacher-pupil's relations and mutual trust and affects the pupil's reputation amidst their peers and faculty (Abu-Ahmed, 2013). Student misbehaviors hinder the learning of the student who misbehaved as well as his or her classmates. When teachers spend an excessive amount of time attending to student misconduct, less time is spent on classroom instruction. The absence of some students from the learning environment is a factor in the Discipline Gap that has been closely linked to the Achievement Gap and the School-to-Prison Pipeline (Gregory et al., 2010). Arcia (2006) observed two comparable cohorts of students, with only one difference: one cohort had at least one suspension, while the other had no suspension. After the first year, the suspended students were three grade levels behind the non-suspended cohort in reading and were nearly five years apart by year two. Carrell and Hoesktra (2010) found that by adding just one more difficult boy to a classroom of 20 students, decreases test scores by nearly two percentile points.

School suspension has been found to be a strong predictor of students dropping out of high school or not graduating on time (Raffaele-Mendez & Knoff., 2003). When students are removed from the classroom loss of instructional time occurs, bonds with schools and peers diminishes, and less investment in the learning process follows; which leads to less motivation in academic success (Gregory et al., 2010). Students who are less bonded to school may be more likely to turn to lawbreaking activities and become less likely to experience academic success (Hawkins, Smith, & Catalano, 2004). Suspensions can also forecast the probability of going to

prison, a chain of events commonly known as the “school to prison pipeline” (Christensen, 2012).

Ayers, Dohrn, & Ayers, 2001 cite that suspension and expulsion might be necessary; by removing disruptive students, the learning environment is positively affected. Removing disruptive students also can act as a deterrent to stop future misbehavior from the students who disrupt the learning environment as well as other classmates who may want to mimic the misconduct. Iselin (2010) reported general findings on the effects of suspension are effective in

- Removing a problematic student from school.
- Providing temporary relief to frustrated school personnel.
- Raising parental attention to their child’s misconduct.

On the contrary as Kinsler (2013) confirmed a rule-based discipline code that requires suspension closes the discipline gap but results in a significant widening of the achievement gap.

Research Summary

Finding ways to decrease the discipline referral rate for African American girls is indeed a challenging mission. School districts have been given the freedom to choose to offer single-sex schools as an effective way in improving educational equality. School leaders must consider new and creative structural arrangements and innovative educational strategies that can serve as viable options to meet the needs of “at risk” learners (Laster, 2004). Single-sex education is among the latest and most attracting reform endeavor being employed in schools where low academic achievement for African American students continues (Dwarte, 2014). The literature review proposed a positive school climate promotes student behavioral and learning outcomes, while guaranteeing both physical and social safety (Zullig et al., 2010). The literature reviewed also suggested that single-sex schools are seen to positively affect performance because of

reduced stereotyped subject choices and increased confidence of girls. The goal of single-sex schools is to create equity by focusing on the needs of each gender. Various studies have considered the effects of single-sex education on academic performance, self-esteem, and student attitudes toward academic subject matter, as well as attitudes toward single or coeducational schooling itself (Anfara & Mertens, 2008). Many factors should be considered before implementing single-sex schools. Rogers (2008) suggests that diversity issues (e.g., race and class) must be strongly considered when assessing single-gender education academic outcomes in public schools in the United States. As stated, single-sex schools have been implemented for a variety of reasons; sometimes for academic reasons, sometimes for social and behavior reasons and sometimes to remedy the wrong of the past, but whatever the reason, there is evidence that it has been successful in public education for low-income youth of color.

CHAPTER THREE: METHODS

The purpose of this causal-comparative study examines the impact single-sex school has on the office discipline referral rates of African American girls collected from two middle schools in an urban district in northeast Florida, one a single-sex middle school ($n=212$) and one co-educational setting ($n=239$). This study also seeks to realize the perceptions of the African American girls from two middle schools in an urban district in northeast Florida, one a single-sex middle school ($n=212$) and one co-educational setting ($n=239$) through the use of the Secondary Classroom Climate Assessment Instrument - Student (CCAI-S-S).

Design

The present study utilized a quantitative, ex post facto, casual comparative study. A Chi-square analyses, based on two-way contingency tables, were used to compare the relative frequency of office discipline referrals by offense and school setting. A Chi Square Test of Independence was chosen to investigate the association, if any between Office Discipline Referrals and educational setting due to placement in either a single-sex or coeducational classroom setting over a one-year period. The Chi-square test for independence in a contingency table are classified by two (nominal or ordinal) classification variables into a two-way contingency table. This table contains the counts of the number of individuals in each combination of the row categories and column categories. The chi-square distribution is a nonparametric test used to determine whether there is any association between the distributions of two categorical variables (single-sex participants and co-educational participants), and the two levels of discipline referrals (Hinkle, Wiersma, & Jurs, 1998). An alpha level of 0.05 was used to determine the statistical significance of the chi-square tests. Descriptive summary statistics were developed using two-way contingency table analysis.

This study also used the Classroom Climate Quality Analytic Assessment Instrument (CCAI) to survey student perceptions of classroom climate. Shindler, Taylor, Cadenas, and Jones (2003) developed the Classroom Climate Quality Analytic Assessment Instrument. According to Shindler, Jones, Williams, Taylor, and Cardenas (2009), CCAI's purpose is to capture a detailed understanding of each school's function, health, and performance. In one study of the Alliance for the Study of School Climate (ASSC) CCAI, Shindler et al. (2003) reported that the analytic-scale of the CCAI illustrated stronger reliability 73 and validity than other traditional school climate assessments. Further, they reported the CCAI's other advantages over other forms of school climate assessments was its inclusion of a meaningful definition of school climate which helped educators use a sound diagnostic instrument, but also a basis for initiating a discussion about prescriptions for improvement (Shindler et al., 2003).

This survey was accomplished using analytic type measures to obtain higher degrees of reliability. For each item the participant can rate what they perceive best reflects their reality in the school e.g., low, middle-low, middle, high-middle, or high. The survey centered on the students' perceptions of school climate in the single-sex and co-educational school experience. All participants for this study remained anonymous and any identifying information shared on the survey was not be disclosed. The questions centered on the participants' perceptions of the discipline environment, student interactions, learning/assessment and attitude and culture in both educational settings.

Independent *t* tests were conducted to test the hypotheses related to the perceptions of school culture of African American girls from two middle school and determine the effect of school setting (one a single-sex and one co-educational) on the Secondary Classroom Climate Assessment Instrument for Discipline Environment, Student Interactions, Learning/Assessment

and Attitude and Culture. An Independent t test is used when we want to know whether there is a difference between populations (Green & Salkind, 2010).

Research Questions

To assess the benefits for students who attended the single-sex and coeducational programs, the following research questions were used to guide this study. The study attempted to answer the following:

RQ1: What is the association between the number of office discipline referrals in a single-sex versus co-educational school setting for African American middle school girls?

RQ2: How do African American girls perceive the discipline environment in two different instructional setting (single-sex and co-educational setting)?

RQ3: How do African American girls perceive student interactions in two different instructional setting (single-sex and co-educational setting)?

RQ4: How do African American girls perceive learning and assessments in two different instructional setting (single-sex and co-educational setting)?

RQ5: How do African American girls perceive attitude and cultures in two different instructional setting (single-sex and co-educational setting)?

Null Hypothesis

In addressing the research question, the study retained or rejected the following null hypotheses:

H₀1: There is no statistically significant association between the number of discipline referrals in two different educational setting (single-sex vs. co-educational).

H₀2: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on the discipline environment in two

different instructional setting (single-sex and co-educational setting).

H03: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on student interactions in two different instructional setting (single-sex and co-educational setting).

H04: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on learning and assessment in two different instructional setting (single-sex and co-educational setting).

H05: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on attitude and culture, in two different instructional setting (single-sex and co-educational setting).

Participants and Setting

The participants for the study was drawn from two urban public middle schools located in Northeast Florida. The type of sampling used is a sampling of convenience using two schools; one school, a traditional co-educational public middle school and a public middle school with single-sex academies housed in the same building: male and female on different floors. The participants housed in the single-sex setting consist of 212 female students enrolled in a single-sex public middle school, 6th -8th grades within one county in an urban city in the state of Florida. Females represent 45% of the school's population. The ethnicity breakdown by female is Caucasian 0%, African–American 98%, Hispanic .02% 2 or more races .005%. Seventy-five percent of the students are economically disadvantaged (FLDOE, 2015). Participants in the traditional co-educational public middle school consist of 239 female students in grade 6th-8th grades located within the same urban city in the state of Florida. Females represent 48% of the school's population. The ethnicity breakdown of females is Caucasian .03%, African-American

92%, Hispanic .04%. Ninety-five percent of the students are economically disadvantaged. For this study, the number of participants sampled was 451 which exceeds the required minimum for a medium effect size. According to Olejnik (1984) a sample size of 100 is sufficiently large enough to yield accurate an inference.

Table 1

School Demographics – Single-Sex School and Co-Educational School Females

School	Students	African	Caucasian	Hispanic	Multi
SSS	212	98%	0%	02%	005%
Co-Ed	239	92%	03%	04%	0%

Instrumentation

The instrument being used to compare the subjects' discipline referral rate is the Office Discipline Referral (ODR); the most commonly used type of data to measure behavior. Many schools use ODRs to assess discipline and monitor using a web based system for evaluation (May et al., 2008). McIntosh et al. (2009), provided evidence that when defined and used systematically, the use of ODRs can be supported as a behavior assessment. The district in the present study uses ODRs as a uniform code of violation documentation of events of serious infractions of behaviors. The district has identified a uniform ODR form and a list of common infractions that warrant ODRs. Violations of the Code of Student Conduct are grouped into four levels: Minor Level- I, Intermediate Level- II, Major Level- III, and Zero Tolerance Level- IV. Level 1 discipline referrals are given to students who engage in minor infractions such as (a) littering in the classroom, hallways, and school grounds (b) being tardy to class or school, (c) using inappropriate language, and (d) abusing hallway, classroom, and bathroom privileges (Pas et al., 2011). Students given Level 2 discipline referrals engage in more serious infractions,

which include (a) cheating, (b) being truant, (c) using vulgar and profane language, and (d) bullying (Pas et al., 2011).

To mitigate threats to inter-rater reliability, the district conducts regular trainings for Assistant Principals and Deans of Students on discriminating between behaviors that do and do not warrant a referral. Once an ODR is written on a student and is processed, it is keyed in the district's web-based data system, FOCUS. A separate list of minor behavior offenses, classroom teachers can address are handled appropriately with in- class interventions that could include, but are not limited to, personal calls to parents/guardians, parent/teacher conferences and referral to school guidance counselors. The number of office discipline referrals accumulated by female students for both schools during the school year, in Table 2, examined to determine if the number of office discipline referrals decreased in association to the type of setting in which the African American female student was enrolled.

Table 2

Office Discipline Referrals

	Single-Sex School	Co-educational School
Total number of AA females enrolled	212	239
Total number of referrals	303	451

The Classroom Climate Quality Analytic Assessment Instrument (CCAI) Secondary Student Version instrument used to survey student perceptions of classroom climate. Shindler et al. (2003) originally developed the Alliance for the Study of School Climate–School Climate Assessment Inventory (ASSC–SCAI), which was published in 2004 by the Western Alliance for the Study of School Climate (now the ASSC). The analyzed concepts of the instrument are physical appearance, faculty relations, student interactions, leadership and decisions, discipline

environment, learning and assessment, attitude and culture, and community relations. For this study the CCAI Secondary Student Version was used. The purpose of the CCAI instrument is to provide a valid measure of overall classroom climate. The CCAI Secondary Student version consists of 57 items and an average completion time of 14 minutes that are measured on an analytic trait scale (Shindler et al., 2003).

The CCAI instrument was used in numerous studies (Gangi, 2010; Shindle et al., 2003; Olsen, Preston, Algozzine, Algozzine, & Cusumano, 2015). In a study of the efficacy of the ASSC system in an urban setting (Shindler et al., 2003), significant advantages for a participant-driven, analytic-scale system were observed. The analytic-scale (i.e., rubric) instrument showed greater soundness (i.e., validity, reliability, efficiency and benefit) than conventional inventories. The analytic instrument also demonstrated added value because it afforded users with an educational tool for understanding climate, a venue for constructing a meaningful definition for “quality school climate” aligned with the school’s goals, and language that helped participants move from the diagnosis of problems to prescriptions for the cures. Gangi (2010), compared three empirically supported broad based school climate measures: School Climate Assessment Inventory (SCAI), Comprehensive School Climate Inventory (CSCI) and the School Climate Inventory-Revised (SCI-R). Of the three school climate instruments selected for review, the Western Alliance for the Study of School Climate’s: School Climate Assessment Inventory (SCAI) accrued the most amount of points for quality and quantity of reliability, validity and norm data (17 points), whereas the other instruments gained 15 and 13 points respectively. A Review and Analysis of School Climate Measures for School Counseling Professionals conducted by Olsen et al. (2015), concluded after an analysis of 26 school climate measures, that the School Climate Assessment Instrument (ASSC) was one of the four school climate measures

that was most accurately and completely fit our criteria for school counselors to use in elementary, middle and high schools.

The validity of the SCAI comes from the fact that there are sufficient items on the instruments that are intended to acquire a comprehensive range of the important characteristics of the school. The validity of the CCAI instruments is demonstrated in the following areas:

- Face Validity - when participants examine the items within each of the CCAI, they will find that what is being described is familiar to them and reflects an accurate analysis of what takes place in a school. These items are further validated by current research findings and recognized characteristics of effective schools.
- Construct Validity - each of the four scales is based in a theoretical set of constructs (defined in part by the 3 psychological dimensions of “psychology of success” (POS). Items within each scale relate to one another on both the practical and theoretical levels. In other words, at the basis of the items are a set of principles that predict school efficacy, and therefore when one finds certain circumstances within a school one also tends to find others.

As illustrated in the table below, the CCAI demonstrates unusually high levels of reliability as measured by the Chronbach’s Alpha reliability test (0.97). The accepted standard for a reliable instrument is 0.7. As displayed in Table 3, each of the sub-scales of the SCAI full version reflect alpha scores much better than that standard, as well as other recognized school climate instruments. Reliability estimates for all 4 subscales tested ranged from good to strong across assessments with a value ranging from $\alpha = .88$ to $\alpha = .93$ (ASSC, 2014).

Table 3

ASSC CCAI Sub-scale

SSC CCAI Sub-scale	Cronbach's Alpha Reliability measure			Correlation with Student Achievement (overall school mean to mean)
	Student SCAI-S-S 7.3	Teacher SCAI-S-G 7.1.8	Parent SCAI-S-G 7.1.8	
Size of Data Set	N = 853	N = 342	N = 89	
1. Discipline Environment	.91	.80	.94	0.8
2. Student Interactions	.88	.83	.90	0.7
3. Learning & Assessment	.93	.88	.96	0.7
4. Attitude & Culture	.92	.88	.94	0.7

Note. Each of the SCAI sub-scales generates a Chronbach's Alpha reliability measure of .73 or above. The overall Chronbach's Alpha for each instrument and data set ranged from .97 to .98.

Table 4 provides example trait scales for each factor of classroom climate. The version of the CCAI used for this study can be found in Appendix A.

Table 4

Overview of Each Subscale on the CCAI

Subscale	Overview
Discipline environment	Examines the relationship between the management and discipline approaches used within the school and the climate that is created as a result. This dimension includes the degree to which management strategies promote higher levels of responsibility and motivation. It also examines teacher-student interactions as a source of management and motivation.
Student interactions	Examines the relationships among student expectations, peer interactions, and their place in the school and the climate that exists. This dimension includes the degree to which students' interactions are governed by intention vs. accidental qualities.
Learning-assessment	Examines the relationships among the instructional strategies and the assessment methods used in the school and the climate that is created. Instruction is explored as it relates to its level of engagement, student empowerment and authenticity. Higher quality instruction and assessment methods are contrasted to less effective methods by the degree to which they promote a psychology of success rather than a psychology of failure.
Attitude and culture	Examines the pervasive attitudes and cultures that operate within the school and their relationship to the climate. This dimension explores the degree to which social and/or communal bonds are present within the school, the attitudes that the members of the school possess, and the level of pride and ownership they feel. It includes the degree to which efforts in this area are made intentionally or left to chance.

(Alliance for the Study of School Climate. 2004)

The ASSC-CCAI instruments tend to obtain higher levels of reliability than instruments that use Likert scales or use a yes or no construction. The instrument requires students to read all three descriptors relating to the same indicator and choose the statement that most described the current climate in their classroom. A value of 5 is coded for "High," 3 for "Middle," and 1 for "Low." Students who cannot determine that their current classroom climate is in-between indicators, allowing for a value of 4 to be coded for "High-Middle" and 2 to be coded for

“Middle-Low” (ASSC, 2011). Each item is given a score equivalent to its mean. Item mean scores ranged between 5.0 (high) to 1.0 (low). A higher score on the CCAI discipline environment subscale signifies that the student has an increased feeling that the school discipline environment is respectful, supportive, and student-centered (i.e., “Management strategies . . . promote increased student self-direction over time.”). A higher score on the CCAI school interactions subscale indicates that the student has an increased sense that student interactions are respectful and promote a sense of community (i.e., “Students feel a sense of community”). A higher score on the CCAI learning and assessment subscale specifies that the student has an increased perception that the school learning environment is student-centered and differentiated (i.e., “Teacher has some mode of making sense of, and being responsive to, varying learning styles”). Finally, a higher score on the CCAI attitudes and culture subscale indicates that students perceive the student environment to be increasingly welcoming, supportive, and non-judgmental (i.e., “Most students feel listened to, represented, and that they have a voice.”) (Shindler et al., 2003). A mean is calculated for each dimension.

Procedures

The purpose of this study was to determine whether office discipline referrals of African American females were significantly different in single-sex settings than their counterparts in coeducational classrooms. The results of this study may provide the local school with findings that may determine whether single-sex classrooms help with the improvement of school culture and using discipline referrals to diagnose schoolwide and individual student needs. This study used a quantitative, ex post facto design to examine archival office discipline referral data obtained on sixth through eighth grade African American girls in a public education single-sex

classes and coeducational classes. Archival data from the 2015-2016 school year was used in this investigation.

The population of this study consisted of students enrolled in two large urban public middle schools one who offered single-sex classrooms and the other a traditional co-educational setting located in Northeast Florida. The single-sex school serves 6th-8th grade students. The convenience sample was selected from all African American girls who received a discipline referral out of the total population of 212 sixth-eighth grade African American females during one calendar school year. The co-educational school serves 6th-8th grade students. The convenience sample was selected from all the African American girls who received a discipline referral out of the total population of 239 sixth-eighth grade African American females during one calendar school year.

Students assigned to the single-sex classes during the experimental period are: girls (n=212). Students assigned to co-educational school during the experiment are: girls (n=239). The participants were not randomly selected; therefore, all groups are assumed nonequivalent. Teachers at both schools receive training on the Secondary Student Code of Conduct, offenses, consequences, and interventions.

Office Discipline Referrals (ODR) was collected from the district's reporting system, FOCUS that monitors student offenses and the consequences assigned during one calendar school year. Permission was sought from the school district to collect the ODR data (see Appendix B). ODR data was collected to compare the referrals of students assigned to single-sex classrooms with students who were assigned to traditional co-educational classrooms. ODRs were excluded if students have not been there for both full-time equivalent student counts.

The African American female students in both educational settings in the 2016-2017 school year were surveyed. See Appendix C for CCAI instructions. The researcher sent electronic links to the CCAI to students in each school that were designated in the study. Reviewing the number of responses, the researcher set the sample for this study to be those schools with at least a 50% student response rate to the online CCAI. Students accessed the survey through a secure website hosted by QuestionPro as suggested by the instrument's author through e-mail correspondence (J. Shindler, personal communication, October 8, 2015, see Appendix D). The researcher used this instrument with permission from its author and a copy the instrument was directly uploaded into a unique account created for this study. The researcher acquired permission from district administration prior to e-mailing principals with information regarding this research project, details regarding informed consent, and the link from which African American girls in both settings used to take the survey. The researcher followed up with each principal and district leader to encourage student participation. Shindler et al. (2003) determined the CCAI's can be administered within a half-hour for the entire instrument with minimal instruction, demonstrating the instrument's usability.

The female students' perception of the school's climate was measured quantitatively on an Analytical-type scale comprised of a survey developed by the ASSC. The survey centers on the students' perceptions of their school's climate. All participants for this study remained anonymous and any identifying information shared on the survey not be disclosed. The questions examined the participants' perceptions of the discipline environment, student interactions, learning/assessment, and attitude and culture in the single-sex classrooms. The data collected from this survey helped to determine whether a single-sex environment or co-

educational environment is the most beneficial to improving the culture and climate of African American girls.

Approval was received from Liberty University Institutional Review Board. Informed consents were obtained and all participants' confidentiality was protected. The letter from the Liberty University IRB approving this research can be found in Appendix E.

Data Analysis

To determine, "what is the association between the numbers of office discipline referrals in a single-sex versus co-educational school setting for African American middle school girls," the study utilized a two-way contingency table analyses with the Pearson Chi-Square statistic using SPSS between ODR and educational setting to assess if an association exists between ODR and educational setting (single-sex school vs. co-educational). This data analysis included the student referral data from the 2015-2016 school year. A chi-square analysis is the most appropriate statistical test to determine if any significant differences exist across the distribution of nominal variables (Tuckman, 1999). To be certain the assumption of expected cell values was met, the researcher analyzed the 2 x 2 chi-square analysis with school settings and the number of office discipline referrals by levels. To meet the assumption, no more than 20% of the cells can have expected values of less than five and no cells can have values of zero. An Alpha level of 0.05 was used. When the calculated value is larger than the critical value, with alpha of .050, the null hypothesis was rejected (suggesting a significant relationship).

Independent *t* Test were conducted to evaluate whether the mean of the ASSC CCAI subscores were significantly different from the accepted mean for African American girls in two different instructional settings (single-sex and co-educational setting) in an urban middle school. Item mean scores will range between 5.0 (high) to 1.0 (low). An Independent *t* Test is

appropriate when it compares the means between two unrelated groups on the same continuous, dependent variable. The model assumes that a difference in the mean score of the dependent variable is found because of the influence of the independent variable (Taylor, 2005).

Descriptive statistics was computed prior to running the Independent-Sample *t* Test. To ensure the scores are normally distributed (bell-shaped), a One-Sample Kolmogorov-Smirnov test was used to ensure. Warner (2012), states when multiple analysis are run on a single data set, care must be taken to avoid a type I error, such as a Bonferroni Correction. For this study, 4 *t*-tests were run on the data set, therefore the usual *p* level of 0.05 was divided by 4. Thus, the alpha level will be set at $p < .0125$, due to the Bonferroni Correction. A Levene's Test was performed to test for the homogeneity of variance.

CHAPTER FOUR: FINDINGS

This study was conducted to determine whether single-sex settings have positive effects in decreasing discipline referrals and increasing perceptions of a positive school climate for African American girls. To this end, comparisons were made regarding discipline referrals and perceptions of school climate between 451 African American female students in 6th through 8th grade who attend a single-sex school ($n = 212$) versus a co-educational middle school ($n = 239$). In this study, the independent variable was instructional setting: single-sex versus co-educational.

Two types of discipline referrals were included in this study as dependent variables. Level 1 discipline referrals are given to students who engage in minor infractions such as (a) littering in the classroom, hallways, and school grounds (b) being tardy to class or school, (c) using inappropriate language, and (d) abusing hallway, classroom, and bathroom privileges (Pas et al., 2011). Students given Level 2 discipline referrals engage in more serious infractions, which include (a) cheating, (b) being truant, (c) using vulgar and profane language, and (d) bullying (Pas et al., 2011).

The Classroom Climate Quality Analytic Assessment Instrument (CCAI) was used in this study to measure four facets of school climate: (a) discipline environment, (b) student interactions, (c) learning and assessments, and (d) attitudes and culture. The CCAI is scored using a Likert-type scale from 1 to 5 (Shindler et al., 2003). A higher score on the CCAI discipline environment subscale signifies that the student has an increased feeling that the school discipline environment is respectful, supportive, and student-centered (i.e., “Management strategies . . . promote increased student self-direction over time.”). A higher score on the CCAI school interactions subscale indicates that the student has an increased sense that student

interactions are respectful and promote a sense of community (i.e., “Students feel a sense of community”). A higher score on the CCAI learning and assessment subscale specifies that the student has an increased perception that the school learning environment is student-centered and differentiated (i.e., “Teacher has some mode of making sense of, and being responsive to, varying learning styles”). Finally, a higher score on the CCAI attitudes and culture subscale indicates that students perceive the student environment to be increasingly welcoming, supportive, and non-judgmental (i.e., “Most students feel listened to, represented, and that they have a voice.”) (Shindler et al., 2003).

The purpose of Chapter Four is to present and discuss the results from statistical analyses conducted to inform the acceptance or rejection of the five null hypotheses posed in this study. The chapter opens with a review of the study research questions and associated null and alternative hypotheses and continues with a summary on the preparation of study data. The review of study findings of initiates with a presentation of participant and CCAI subscale descriptive statistics. The chapter then turns to a review of statistical findings as they pertain to the five study research questions. Results are presented in sections that correspond to the five research questions. Information on the assumptions of data relevant to the specific analysis used for hypothesis testing is included in these sections. A review and discussion of findings from additional analyses complete the results component of this chapter. The chapter ends with a summary of findings. Tables augment the text material.

Research Question

RQ1: What is the association between the number of office discipline referrals in a single-sex versus co-educational school settings for African American middle school girls?

RQ2: How do African American girls perceive the discipline environment in two different instructional setting (single-sex and co-educational setting)?

RQ3: How do African American girls perceive student interactions in two different instructional setting (single-sex and co-educational setting)?

RQ4: How do African American girls perceive learning and assessments in two different Instructional setting (single-sex and co-educational setting)?

RQ5: How do African American girls perceive attitude and cultures in two different instructional setting (single-sex and co-educational setting)?

Hypotheses

H₀1: There is no statistically significant relationship between the number of discipline referrals and educational setting (single-sex vs. co-educational).

H₀2: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on the discipline environment in two different instructional setting (single-sex and co-educational setting).

H₀3: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on student interactions in two different instructional setting (single-sex and co-educational setting).

H₀4: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on learning and assessment in two different instructional setting (single-sex and co-educational setting).

H₀5: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on attitude and culture, in two different instructional setting (single-sex and co-educational setting).

Data Preparation

Data were entered into SPSS 24.0 data file. The initial data set, comprised of 102 cases (participants), was reviewed for entry errors; none were found. The data review uncovered that two respondents were male, and these cases were removed. This resulted in a 98% response rate. The data file was examined for missing data; all questions were answered by the students and no missing data existed in the file. After calculating the Cronbach's alphas for the CCAI subscales (discussed in the next section) the CCAI subscales were computed in accordance with Shindler et al. (2003). The subscale items were summed, and the summed score was divided by the number of items in the subscale to derive a mean subscale score. The CCAI items are scored using a 5-point Likert-type scale from 1=low to 5=high. A higher score on the respective CCAI subscale denotes a more positive perception of the specific classroom climate construct.

Descriptive Statistics

Descriptive statistics were calculated on participant and study variables. The sample for the study was comprised of 451 female students, 212 of whom attended the single-sex school and 239 of whom attended a co-educational middle school. The grade levels of the 100 girls by the school they attend is presented in Table 5. Results from a 2 X 3 chi-square contingency test of independence indicated that the frequency/percentage of girls by grade level did not significantly differ across the two schools, $\chi^2(2) = 2.81, p = .245$.

Table 5

Descriptive Statistics: Frequencies/Percentages of Girls' Grade Levels by Instructional Setting (N = 100)

Instructional Setting	Grade Level					
	6th		7th		8th	
	N	%	n	%	n	%
Single-sex School	23	46.0	9	18.0	18	36.0
Co-educational Middle School	15	30.0	13	26.0	22	44.0

Note. The frequency/percentage of girls in each grade level did not significantly differ across the two instructional settings, $\chi^2(2) = 2.81, p = .245$.

Descriptive statistics (i.e., mean, standard deviation, minimum and maximum scores) were computed for the four CCAI subscales and are presented in Table 6. The CCAI subscale mean scores did not greatly vary: the subscale mean scores ranged from a low of $M = 3.41$ for the student interactions subscale to a high of $M = 3.60$ for the learning and assessment subscale. None of the CCAI subscale minimum scores were 1.00, which indicated that none of the participants systematically reported a score of 1.00 for any of the CCAI subscale items.

A scale should have a Cronbach's alpha of .70 or higher to demonstrate sound inter-item reliability (Treiman, 2014). All measures in this study showed sound internal consistency. The Cronbach's alphas for the CCAI subscales ranged from a low of $\alpha = .77$ for the discipline environment subscale to a high of $\alpha = .86$ for the attitudes and culture subscale.

Table 6

Descriptive Statistics: CCAI Subscales (N = 100)

	<i>N of Items</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Alpha</i>
CCAI Discipline Environment	8	3.54	.76	1.38	5.00	.77
CCAI School Interactions	8	3.42	.75	1.75	5.00	.79
CCAI Learning & Assessment	7	3.60	.83	1.14	5.00	.80
CCAI Attitudes & Culture	11	3.54	.79	1.18	5.00	.86

Note. *M* = mean, *SD* = standard deviation, *Min* = minimum score, *Max* = maximum score, *Alpha* = Cronbach's alpha.

Results

Different inferential analyses were conducted in this study in correspondence with the coding of the respective independent and dependent variables. The first research question was addressed by conducting a two-way contingency table, also known as a chi-square test of independence (Treiman, 2014). The second through fifth research questions were addressed through the calculation of independent samples *t*-tests. In this part of the chapter, the results are presented in five sections. Each section opens with a restatement of the null hypothesis(es) and ends with a statement as to whether the null hypothesis(es) the researcher failed to reject the null hypothesis or rejected, based on the results from the statistical analyses conducted for hypothesis testing.

All inferential statistics have assumptions of the data that must be met (Gall, Gall, and Borg, 2007). Therefore, each section includes a discussion of the assumptions and results (if applicable) from assumption testing required for the respective statistical tests. The 2 X 2 chi-square contingency test has two assumptions: no less than 20% of the cells can have expected values lower than 5 and no cells can have values of 0 (Gall, Gall, & Borg, 2007). For independent samples *t*-tests, two primary assumptions were tested. The first assumption for an

independent samples *t*-test is normality in the distribution of dependent variable scores around the mean (Gall et al., 2007). This assumption was tested by conducting a one-tailed Kolmogorov-Smirnov (K-S) test. A non-significant K-S test indicates that the assumption of normality is met (Gall et al., 2007). The second assumption is homogeneity of variances, which means that the variances of the dependent variable are equivalent across the two independent variable groups (Gall et al., 2007). A Levene's test is conducted to test this assumption, and a non-significant Levene's test signifies that the assumption of homogeneity of variances is met (Gall et al., 2007).

Null Hypothesis 1-Types 1 and 2 Discipline Referrals across Instructional Settings

The null hypothesis of the first research question was **H₀₁**: There will be no statistically significant association between the numbers of discipline referrals and educational setting (single-sex vs. co-educational). A two-way contingency table analysis, also known as a chi-square contingency test of independence, was conducted to evaluate if there were significant percentage differences regarding Type 1 and Type 2 discipline referrals between the 212 girls attending the all-girls academy and the 239 girls attending the co-educational middle school. Data met the two assumptions for a 2 X 2 chi-square contingency test.

The results from the 2 X 2 chi-square contingency test, presented in Table 5, were found to be significant, $\chi^2(2, N = 726) = 3.77, p < .05$. The percentage (55.9%) of girls receiving Level 1 discipline referrals who attended the co-educational middle school was significantly higher than the percentage (44.1%) of girls receiving Level 1 discipline referrals who attended the all-girls academy. Moreover, the percentage (63.1%) of girls receiving Level 2 discipline referrals who attended the co-educational middle school was significantly higher than the percentage

(36.9%) of girls receiving Level 2 discipline referrals who attended the single-sex school. Based on the significant findings, the null hypothesis for the first research question was rejected.

Table 7

2 X 2 Chi-square Contingency Test: Levels 1 and 2 Discipline Referrals by Instructional Setting (N = 100)

	Frequency/Percentage of Level 1 Discipline Referrals		Frequency/Percentage of Level 2 Discipline Referrals	
	n	%	N	%
All-girls Academy	130	44.1	159	36.9
Co-educational Middle School	165	55.9	272	63.1
Total	295	100.0	431	100.0

Note. $\chi^2(2, N = 726) = 3.77, p < .05$.

Null Hypothesis 2- CCAI Discipline Environment across Instructional Settings

The null hypothesis of the second research question of the study (i.e., **H₀2**: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on the discipline environment in two different instructional setting [single-sex and co-educational setting]) was addressed by conducting an independent-samples *t*-test. Warner, 2013, states when multiple analysis are run on a single data set, care must be taken to avoid a type I error, such as a Bonferroni Correction. For this study, 4 *t*-tests were conducted on the data set, therefore the usual *p* level of 0.05 was divided by 4. Thus, the alpha level will be set at $p < .0125$, due to the Bonferroni Correction. A non-significant K-S test, $K-S(100) = .200, p = .069$, indicated that the assumption of normality was met for the discipline environment data. The non-significant Levene's test, $F(100) = 0.52, p = .472$, confirmed that data further met the homogeneity of variances assumption.

Results from the independent samples t -test are presented in Table 8. Results showed no significant perceived discipline environment differences across instructional settings, $t(98) = 1.60, p = .113$. While the discipline environment mean score of 3.66 ($SD = .76$) for the 50 girls attending the all-girls academy was higher than the discipline environment mean score of 3.42 ($SD = .74$) for the 50 girls attending the co-educational middle school, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for the second research question the researcher failed to reject the null hypothesis.

Table 8

Independent Samples T-test: CCAI Discipline Environment Mean Scores across Instructional Settings (N = 100)

Instructional Setting	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Df</i>	<i>P</i>
				1.60	98	.113
Single-sex School	50	3.66	.76			
Co-educational Middle School	50	3.42	.74			

Null Hypothesis 3- CCAI Student Interactions across Instructional Settings

The null hypothesis of the third research question of the study (i.e., **H₀₃**: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on student interactions in two different instructional setting [single-sex and co-educational setting]) was addressed by conducting an independent-samples t -test. A non-significant K-S test, $K-S(100) = .182, p = .060$, indicated that the assumption of normality was met for the student interactions data. The non-significant Levene's test, $F(100) = 0.06, p = .807$, showed that the homogeneity of variances assumption was also met for the data.

Results from the independent samples *t*-test, presented in Table 9, indicated that perceptions of student interactions did not significantly differ across instructional settings, $t(98) = -0.52, p = .606$. The student interactions mean score of 3.38 ($SD = .75$) for the 50 girls attending the all-girls academy was not significantly different from the student interactions mean score of 3.45 ($SD = .75$) for the 50 girls attending the co-educational middle school. Based on the non-significance of the results, the null hypothesis for third research the researcher failed to reject the null hypothesis.

Table 9

Independent Samples T-test: CCAI Student Interaction Mean Scores across Instructional Settings (N = 100)

Instructional Setting	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>Df</i>	<i>P</i>
				-0.52	98	.606
Single-sex School	50	3.38	.75			
Co-educational Middle School	50	3.45	.75			

Null Hypothesis 4- CCAI Learning and Assessment across Instructional Settings

An independent samples *t*-test was conducted to address the null hypothesis of the fourth research question of the study (i.e., **H₀₄**: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on learning and assessment in two different instructional setting [single-sex and co-educational setting]). A non-significant K-S test, $K-S(100) = .082, p = .092$, indicated that the assumption of normality was met for the learning and assessment data. The non-significant Levene's test, $F(100) = 1.15, p = .287$, confirmed that data also met the assumption of homogeneity of variances.

Results from the independent samples *t*-test are presented in Table 10. Results were not significant, $t(98) = 1.64$, $p = .104$, which indicated that perceptions of learning and assessment did not significantly differ across instructional settings. While the learning and assessment mean score of 3.73 ($SD = .84$) for the 50 girls attending the all-girls academy was higher than the learning and assessment mean score of 3.47 ($SD = .80$) for the 50 girls attending the co-educational middle school, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for fourth research question the researcher failed to reject the null hypothesis.

Table 10

Independent Samples T-test: CCAI Learning and Assessment Mean Scores across Instructional Settings (N = 100)

Instructional Setting	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>Df</i>	<i>P</i>
				1.64	98	.104
Single-sex School	50	3.73	.84			
Co-educational Middle School	50	3.47	.80			

Null Hypothesis 5-CCAI Attitudes and Culture across Instructional Settings

For the fifth and final null hypothesis of the study, (i.e., **H₀₅**: There is no significant difference between African American middle school girls' perception of their school's classroom climate based on attitude and culture, in two different instructional setting [single-sex and co-educational setting]), an independent samples *t*-test was conducted. The attitudes and culture data displayed normality as indicated by a non-significant K-S test, $K-S(100) = .392$, $p = .236$. Further, the data met the assumption of homogeneity of variances as indicated by a non-significant Levene's test, $F(100) = 0.48$, $p = .492$.

Table 11 presents the results of the independent samples *t*-test. Results were not significant, $t(98) = 1.07, p = .290$: perceptions of attitudes and culture did not significantly differ across instructional settings. The attitudes and culture mean score of 3.62 ($SD = .78$) for the all-girls academy students was higher than the attitudes and culture mean score of 3.47 ($SD = .80$) for the co-educational middle school students; however, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for fifth research question the researcher failed to reject the null hypothesis.

Table 11

Independent Samples T-test: CCAI Attitudes and Culture Mean Scores across Instructional Settings (N = 100)

Instructional Setting	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>Df</i>	<i>P</i>
				1.07	98	.290
Single-sex School	50	3.62	.78			
Co-educational Middle School	50	3.45	.79			

Summary

This study examined if discipline referrals and perceptions of a positive school climate significantly differed for African American girls who attend an all-girls academy ($n = 50$) versus a co-educational middle school ($n = 50$). Results for hypothesis testing showed that the percentage of girls with Type 1 and Type 2 discipline referrals was significantly higher in the co-educational versus the single-sex instructional setting. However, results for hypothesis testing showed no significant school climate differences across instructional settings. The implications of these findings are discussed in Chapter Five.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Through this study, the researcher analyzed the number of referrals documented over a one-year span at each of the identified schools. The researcher reviewed the history of discipline in both school settings (single-sex and co-educational, as well as the factors that have influenced the climate of the classrooms that may contribute to some of the undesired behaviors. The purpose of this chapter is to review and discuss the summary of the findings, the discussion of the findings, the limitations of the study, the implications of the study, and the recommendations for future research.

The mission of single-sex education is to offer learning environments that will produce the best in each gender and will provide opportunities for success that may not be available in co-educational settings. Single-sex school advocates trust that single-sex education – particularly for minorities and low-income families – is an answer for unequal education. One of the perceived goals of single-sex schools is to decrease distractions and discipline problems. Sadker and Sadker (1995) argue that single-sex education is beneficial for girls because teachers' and peers' sexist attitudes and behaviors interfere with girls' learning in coeducational environments.

Discussion

The purpose of this study was to examine the relationship of office discipline referrals for African American girls enrolled in single-sex and co-educational environments. This study also examined if there was an association between African American middle school girls' perception of their school's climate based on the discipline environment, student interactions, learning environment, learning/assessment and attitude and culture.

Overall Office Discipline Referrals by School Setting

One of the goals of this study was to examine the relationship of office disciplinary referrals (ODRs) for African American girls enrolled in single-sex and co-educational environments. In response to research question one, for a sample of 726 referrals with the percentage (55.9%) of girls receiving Level 1 discipline referrals who attended the co-educational middle school was significantly higher than the percentage (44.1%) of girls receiving Level 1 discipline referrals who attended the single-sex school. Moreover, the percentage (63.1%) of girls receiving Level 2 discipline referrals who attended the co-educational middle school was significantly higher than the percentage (36.9%) of girls receiving Level 2 discipline referrals who attended the single-sex school results indicated that overall African American middle school girls in the single-sex setting were less likely to obtain an ODR than African American middle school girls who were in the co-educational setting. These results are like findings presented by the Single Gender Initiatives for the South Carolina Department of Education which showed in survey data from the 2008-2009 school year in discipline, 7 of the 10 schools submitting data indicated that single-sex classes had a lower number of discipline referrals than coeducational classes (Chadwell, 2010).

The results of the Chi-square test for independence indicated that a significant Association between school setting (single-sex and co-educational) and the frequency of level of offenses in office discipline referrals. The null hypothesis was rejected, for Research Question 1, stating there will be no statistically significant association between the numbers of discipline referrals and educational setting (single-sex vs. co-educational).

Overall Perceptions on the Secondary Classroom Climate Assessment Instrument

The results for Research Question Two, if there was a statistically significant difference in how African American middle school girls perceive their school's classroom climate based on the discipline environment. The results from the independent samples *t*-test indicates, while the discipline environment mean score of 3.66 ($SD = .76$) for the 50 girls attending the single-sex school was higher than the discipline environment mean score of 3.42 ($SD = .74$) for the 50 girls attending the co-educational middle school, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for the second research question, the researcher failed to reject the null hypothesis.

These findings were unexpected due to the significant difference between the number of ODRs received by the single-sex school compared to the coeducational school. Although the school climate results based on the discipline environment for the girls attending the single-sex school was higher than the discipline environment for the girls attending the co-educational middle school, the literature review proposed a positive school climate promotes student behavioral and learning outcomes, while guaranteeing both physical and social safety (Zullig et al., 2010). The single-sex school in this study is only in its second year of implementation. Previous studies with data reported by principals showed newly implemented single-sex schools also had conflicting reports about lower discipline (National Association for Single Sex Public Education (NASSPE), 2011).

With respect to Research Question Three, if there was a statistically significant difference in African American middle school girls' perception on student interactions in the single-sex environment versus co-educational setting, results from the independent samples *t*-test revealed, that perceptions of student interactions did not significantly differ across instructional settings,

$t(98) = -0.52, p = .606$. The student interactions mean score of 3.38 ($SD = .75$) for the 50 girls attending the all-girls academy was not significantly different from the student interactions mean score of 3.45 ($SD = .75$) for the 50 girls attending the co-educational middle school. Based on the non-significance of the results, the null hypothesis for third research question the researcher failed to reject the null hypothesis.

Although these results contradict majority of the research presented in this study. Riordan, et al. (2008), stated that all girls' schools promote a more positive interaction. A systematic review of the literature on single-sex schooling found students in the single-sex elementary and middle schools demonstrated a greater sense of community, interacted more positively with one another, displayed greater respect for their teachers, were less likely to instigate class disruptions, and displayed more positive student role modeling than students in the coed comparison school sample. Single-sex school personnel, students, and parents also highlighted the positive socio-emotional benefits of attending a single-sex school.

Research Question Four, which focused on the perception of learning and assessments between the two learning environments among African American middle school girls indicated from the independent samples t -test the results were not significant, $t(98) = 1.64, p = .104$, which indicated that perceptions of learning and assessment did not significantly differ across instructional settings. While the learning and assessment mean score of 3.73 ($SD = .84$) for the 50 girls attending, the all-girls academy was higher than the learning and assessment mean score of 3.47 ($SD = .80$) for the 50 girls attending the co-educational middle school, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for fourth research question the researcher failed to reject the null hypothesis.

Chapter Two of this study discussed the effects of single-sex education on academic performance. In a study conducted by Yalankaya and Ulu (2012) compared the differences between single-sex schools and co-education school. They found very little difference in the results of academic achievement across schools. The students in the SS and CE schools had similar grade point averages, whereas previous studies have shown the females in SS schools tended to have higher academic achievement. The single-sex findings related to the learning culture, supports the literature presented. These results also correlate with Braithwaite (2010), that there was no clear relationship or advantage between the single-sex setting and improved achievement and performance as compared to the coeducational setting.

Finally, the independent samples *t*-test results for Research Question Five, if there was a statistically significant difference in how African American middle school girls perceive their school's classroom climate based on attitude and culture in two different instructional school settings (single-sex and co-educational setting) were not significant, $t(98) = 1.07, p = .290$: perceptions of attitudes and culture did not significantly differ across instructional settings. The attitudes and culture mean score of 3.62 ($SD = .78$) for the all-girls academy students was higher than the attitudes and culture mean score of 3.47 ($SD = .80$) for the co-educational middle school students; however, it was not significantly higher. Based on the non-significance of the results, the null hypothesis for fifth research question the researcher failed to reject the null hypothesis.

A higher score on the CCAI attitudes and culture subscale indicates that students perceive the student environment to be increasingly welcoming, supportive, and non-judgmental (i.e., "Most students feel listened to, represented, and that they have a voice.") (Shindler et al., 2003).

In review of the literature of this study, other researchers have published findings that support these findings. Brutsaert and Bracke (1994), in comparing SS versus CE schools

(elementary Catholic, n=965 girls) found no differences in the case of sense of belonging between SS girls and CE girls. Site visits were made by Riordan (2008) to survey and compare school climate-related data. The survey revealed, teachers in single-sex high schools evaluated problems with student behavior as less serious than teachers in coed schools, but the opposite was true at the middle school level.

Conclusion

For years, there has been an increasing interest in student misbehavior, office discipline referrals, and discipline disproportionately. The concerns also extend over a disciplinary gap between specific student groups, including African American girls. Based on the analysis of the data, it can be concluded that in this study, the single-sex school setting is an environment that diminishes the frequency of office discipline referrals in African American girls. This research concurs with previous single-sex education research that included discipline referral data, Ferrara (2005) found that students in single-sex classes were referred for administrative discipline less often than students in coeducational classes. This study builds significantly on the limited literature that sex differences in single-sex schools mitigate disruptive classroom behavior.

Sax (2005) states regarding the effectiveness of gender specific classrooms: simply separating boys and girls into separate classrooms is not a guarantee of any good happening. Despite the fact, the current study was unable to prove significant difference in classroom climate between the single-sex and co-educational schools, school climate is an important factor in the successful implementation of school reform programs (Guffey, Higgins-D'Alessandro, & Cohen, 2011). The purpose of the CCAI instrument is to provide a valid measure of overall classroom climate, the single-sex educational setting scored between the middle and middle high on each subscale of the CCAI signifying the school has a strong climate. That strong climate

positively led to the decrease in office discipline referrals. Positive school climate has been found to be correlated with decreased levels of student misbehavior and discipline problems (Welsh, 2003). The research conducted is just beginning of what strategies and approaches that need to be explored in schools employing single-sex educational settings. It is equally important to continue this research concerning girls of color.

Implications

Based on the analysis of the data, it can be concluded that in this study, the single-sex school setting is an environment that diminishes the frequency of office discipline referrals in African American girls. The statistically significant results single-sex settings had on decreasing the office discipline referrals should also lead to the decrease of suspension, expulsion rates, students being retained and even dropping out of school. This study provides new contributions as well adds to the body of research to the school discipline field as it relates to African American girls in Single-sex education by examining the school culture and determining what association exists between office discipline referrals and school environment, It also supports implementing single-sex to prevent the overrepresentation of African American girls suspension and expulsion rates. Prevention programs that target disengaged students. The findings in this research added to Bradley (2009) who attempted to include discipline referrals as a part of her study, but was unable due to lack of the sample size and was only able to report the calculations of the frequencies. Stables (1990) studied 2,300 students (ages 13–14) and found no differences in the perception of subject importance by sex or school type. This coincides with the findings in the current study, there were no significant differences in classroom climate between the single-sex and co-educational school setting. The next steps that should be implemented in the single-sex schools should be to evaluate school culture data that would provide a clear depiction of

student school satisfaction as well as ensuring the purpose of implementing single-sex schools aligns with the school's mission.

Limitations

There are limitations to be considered. First, although Office Discipline Referrals (ODRs) is widely accepted instrument for reporting student discipline characteristics (Irvin, Tobin, Sprague, Sugai, & Vincent, 2004), there is no way to determine if all teachers providing data for this study identified or reported student behavior the same way. Teachers or administrators who witness the same event can categorize the event as a different infraction. Furthermore, infractions that may be overlooked by one teacher maybe an intolerable act by another teacher. Due to the use of archival data, the consistency of teacher referral submissions and entry of the ODRs in the school wide information system cannot be validated for the schools used in this study. Another limitation could be that the data for this study was limited to a one-year period, 2015-2016. Additionally, Riordan et al. (2008) states that without being able to randomly assign participants in a single-sex research study, the researcher cannot address possible variables which might bias research findings such as: the motivational level of students, family background, the quality and motivation of teachers and school climate. Another limitation of this study is associated with the use of self-reported responses since the strength of the results is defended by the capability of the participants to accurately report their responses.

Recommendations for Future Research

The findings of this study offer implications for future researchers who may be interested in studying school climate and single-sex environments. Research has frequently confirmed how student perceptions of school climate can be an important data source for increasing achievement (Thapa, Cohen, Guffey, & Higgins-D'Alessandro, 2013). This study occurred in a very specific

setting and it targeted a specific group of students. The setting of the schools was in an urban, low socioeconomic area of Northeast Florida. To determine the impact of single-sex education on discipline referrals, more longitudinal studies comparing the lives of these girls in 10, 15, and 20 years should be conducted.

If the diminution of the referrals continued, did it affect their college or post-secondary school enrollment and their socio-economic outcomes should be explored. Expanding a study such as this to other demographical student population in schools in different geographical locations would provide additional data. Additional research on male views compared to female viewpoints could provide additional insight and a comprehensive perspective into single-sex school's impact. The researcher believes additional studies regarding interventions given to students prior to initiating an office discipline referral student could expand upon this study's findings. Studies that detail teacher's perception of school climate in single-sex schools compared to coeducational settings could be conducted. It is equally important to continue research with girls of color in effort to help districts employ single-sex educational settings as a reform to help the disparate of African American girls and the increase of Office Discipline Referrals. Finally, a qualitative study could also be performed to further investigate how school culture contributes to the school environment and plays a role in the office discipline referral process.

Summary

The results of the study did not reveal a significant association between African American middle school girls' perception of their school's climate based on the discipline environment, student interactions, learning/assessment and attitude and culture; however, the study did reveal a significant relationship of office discipline referrals for African American girls

enrolled in single-sex and co-educational environments. Research has shown that nationally, African American girls face discipline rates 6 times higher than Caucasian girls; they experience suspension rates higher than 67% of boys as well (U.S. Department of Education Office of Civil Rights, 2014). The number of Office Discipline Referrals (ODRs) received has been shown to be related with adverse student outcomes, including school dropout, lower achievement, academic failure, and antisocial behaviors Spaulding et al. (2010). Exploring single-sex education is only one avenue to address concerns in the overrepresentation of African American girls with ODRs and school suspensions.

Although these findings showed that single-sex schools can improve disproportionalities in the discipline referral rate of African American girls, there are lifelong advantages of attending school in a single-sex educational settings. Key findings in one study showed statistically significant differences in single-sex alumnae. Women who graduated from single-sex schools showed higher SAT scores, greater interest in graduate school, higher self-confidence in academic, mathematical, and computer skills, greater interest in engineering careers, stronger predisposition towards co-curricular engagement, and greater political engagement than women who attended co-educational high schools (Sax, et. al, 2009). Real and lasting benefits that exceed far beyond the middle school years.

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APPENDICES

Appendix A: Secondary Classroom Climate Assessment Instrument - Student (CCAI-S-S)

Appendix B: DCPS Consent to Conduct Research



Accountability and Assessment
 Dr. Kelly Coker-Daniel, Asst. Superintendent
 1701 Prudential Drive
 Jacksonville, FL 32207
 (904) 390-2976

May 27, 2016

DeVonne Lampkin
 10951 Brandon Chase Dr.
 Jacksonville, FL 32219

Dear Mrs. Lampkin:

Your request to conduct research in Duval County Schools has been approved. This approval applies to your project *The girl factor: how single-sex learning environments affect African-American girls' discipline referral rate* in the form and content as supplied to this office for review. Any variations or modifications to the approved protocol must be cleared with this office prior to implementing such changes.

Participation in studies of this nature is voluntary on the part of principals, teachers, staff, and students. Our approval does not obligate any principal, teacher, staff member, or student to participate in your study. **A signed copy of the full approval letter must accompany any initial contact with principals, teachers, parents, and students.**

This approval for research runs through June 30th of 2017. If your research will extend beyond that date, you will have to submit a request for an extension at the appropriate time. You will be required to identify any changes to the original protocol at that time and to supply any revised documents you plan to use, as well as an updated IRB. If there have been no changes to the approved protocol you may refer to the previously submitted paperwork.

The Chief Officer of Human Resources has advised that neither you nor your students/colleagues are to be on any Duval County Public School campus nor have any contact with students until you have gone through the fingerprinting process at DCPS. Please schedule an appointment with the School Police at 904-858-6100 and bring a copy of this approval letter with you to your appointment.

Upon completion of the study, it is customary to forward a copy of the finished report to the Office of Accountability and Assessment, 1701 Prudential Dr., rm. 327, Jacksonville, Florida 32207. Approval from this department must be sought and granted, in advance, of the publication of any reports/articles in which Duval County or any of its schools are mentioned by name.

If you have questions or concerns, please don't hesitate to call me at 390-2976.

Sincerely,

Dr. Kelly Coker-Daniel
 Asst. Supt. of Accountability and Assessment
 Duval County Public Schools

Appendix C: Classroom Climate Inventory Assessment Protocol

Step 1: Select your Target Population(s)

This instrument can be administered through a variety of means. In addition, it is also recommended that the sample size be as large as possible (n = 40+ or 20%+ for students, 50%+ for teachers, 6+ for staff, 20+ for parents, and 3+ for independent evaluators).

Step 2: Gather Data

It is important for those facilitating the administration of the survey to provide accurate directions (see directions on Page One of the instrument) to participants, especially students. Miss-marked surveys cannot be used. A common problem is that participants make too many marks, assuming that each of the 3 descriptions for each item must be rated separately. Participants must feel uninhibited, anonymous, and relaxed for results to be meaningful. It is recommended that participants be given pre-labeled inventories coding their group category and number (e.g., P12 = parent group participant #12).

Step 3: Aggregate the Data

It is recommended that each item be aggregated for participants. Each item should be given a score corresponding to its mean (marks in level 3 are scored a 5, between level 3 and 2 are scored at a 4, scores in the middle of level 2 receive a 3, and so forth - the mean score can be obtained by dividing the total number of points for each item by the number of participants). Item mean scores ranged between 5.0 (high) to 1.0 (low).

Step 4: Data Analysis

Creating a graphic representation of the data is recommended. It offers ease of interpretation and analysis. A table representing group means for each dimension can be effective, as well as a bar graph or other type of chart. (See sample evaluations provided by ASSC.)

Alliance for the Study of School Climate (2014).

Appendix D: E-mail from Dr. John Shindler regarding use of the Classroom Climate**Assessment Instrument**

Re: Use of Classroom Climate Quality Analytic Assessment Instrument Secondary

Student Version

SJ

Shindler, John <jshindl@exchange.calstatela.edu>

Reply all|

To:

Lampkin, Devonne P.;

...

Thu 10/8/2015 10:42 PM

Inbox

Hi Devonne,

To use the online system, we would give you survey and report links in return for a minimal compensation for the rights and site fee of \$200.00. But you would have all the data in xls and spss to work with. And you could also access our tech support for your reports for a little more. That is what most people elect to do. But consider having the school pay and doing a whole school assessment formally.

Best,

John

From: Lampkin, Devonne P. <lampkind@duvalschools.org>
Sent: Thursday, October 8, 2015 10:58 AM
To: Shindler, John
Subject: RE: Use of Classroom Climate Quality Analytic Assessment Instrument Secondary Student Version

Good Afternoon,

Thank you for your quick response. How I would I gain access to your online survey to provide to the students and retrieve data. Do I have to register and if so what is the process? Thank you again.

Your Partner in Learning,
DeVonne Lampkin, Ed. S

----- Original message -----

From: "Shindler, John" <jshindl@exchange.calstatela.edu>

Date: 10/08/2015 1:48 PM (GMT-05:00)

To: "Lampkin, Devonne P." <lampkind@duvalschools.org>

Subject: Re: Use of Classroom Climate Quality Analytic Assessment Instrument Secondary Student Version

Hello Devonne. We are happy to provide survey rights to those doing I funded personal research. But most of those in your situation elect to either use our online system to collect their

study data. Or to engage in a formal school survey process. We are happy to support any of those paths.

Best

John Shindler.

Sent from my iPhone

On Oct 7, 2015, at 4:57 PM, Lampkin, Devonne P. <lampkind@duvalschools.org> wrote:

Good evening,

I am completing my dissertation on THE INFLUENCE OF SINGLE-SEX CLASSROOMS ON AFRICAN AMERICAN GIRLS' DISCIPLINE REFERRAL RATE. I would like to seek permission to use your **Classroom Climate Quality Analytic Assessment Instrument Secondary Student Version** in my research. Please advise how I would be able to obtain paper copy version or the electronic version for use. Thanking you in advance.

Your Partner in Learning,

DeVonne P. Lampkin, Ed. S

Assistant Principal

Ramona Blvd. Elementary

Appendix E: Liberty University IRB Exemption/Approval**LIBERTY UNIVERSITY.**
INSTITUTIONAL REVIEW BOARD

5/26/2016

DeVonne Lampkin

IRB Approval 2536.052616: The Girl Factor: How Single-Sex Learning Environments Affect African American Girls' Discipline Referral Rate

Dear DeVonne Lampkin,

We are pleased to inform you that your study has been approved by the Liberty IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project. Sincerely,

G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research
The Graduate School

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Appendix F: Assent of Child to Participate in a Research Study

What is the name of the study and who is doing the study?

THE GIRL FACTOR: HOW SINGLE-SEX LEARNING ENVIRONMENTS AFFECT
AFRICAN AMERICAN GIRLS' DISCIPLINE REFERRAL RATE

DeVonne P. Lampkin, Ed. S

Why are we doing this study?

The purpose of this study is to explore how the office discipline referrals are impacted of African American girls that attend a single-sex school. This study also seeks the impression African American girls from two middle schools have concerning their school climate. Girls from a single-gender school and a non-single-gender school were included.

Why are we asking you to be in this study?

You are being asked to be in this research study because the data collected could determine if school officials should consider the implementing single-sex programs. Furthermore, students attending the single-sex schools should be the voice heard if the single-sex schools are effective to enhance the culture of schools.

If you agree, what will happen?

If you are in this study, the female students in the program will be surveyed. The survey centers on the students' perceptions of the school's climate which includes four areas: Discipline Environment, Student Interaction, Learning and Assessment, and Attitude and Culture. All participants for this study will remain anonymous and no information shared during the survey will not be disclosed. The survey will take approximately 14 minutes to complete.

Do you have to be in this study?

No, you do not have to be in this study. If you want to be in this study, then tell the researcher. If you do not want to, it is OK to say no. The researcher will not be angry. You can say yes now and change your mind later. It is up to you.

Do you have any questions?

You can ask questions any time. You can ask now. You can ask later. You can talk to the researcher. If you do not understand something, please ask the researcher to explain it to you again.

By completing the survey means that you want to be in the study.

Signature of Child

Date

DeVonne P. Lampkin, Ed.S

Dlampkin3@liberty.edu

Advisor: Dr. Michelle Barthlow

mjbarthlow@liberty.edu

Liberty University Institutional Review Board,
1971 University Blvd, Carter 134, Lynchburg, VA 24515

or email at irb@liberty.edu.assent

Appendix G: Parent/Guardian Consent Form

THE GIRL FACTOR: HOW SINGLE-SEX LEARNING ENVIRONMENTS AFFECT AFRICAN AMERICAN GIRLS' DISCIPLINE REFERRAL RATE

Liberty University

Department of Educational Leadership School of Education

Your child/student is invited to be in a research study of the experiences of African American female students in single-gender classrooms. She was selected as a possible participant because she attends a middle school that offers single-gender educational opportunities. I ask that you read this form and ask any questions you may have before agreeing to allow her to be in the study.

DeVonne Lampkin, a doctoral candidate in the Department of Educational Leadership at Liberty University, is conducting this study.

Background Information: The purpose of this study is to explore how the office discipline referrals are impacted of African American girls that they attend a single-sex school. This study also seeks the impression African American girls from two middle schools have concerning their school climate. Girls from a single-gender school and a non-single-gender school will be included.

Procedures: If you agree to allow your child/student to be in this study, I would ask him or her to do the following things:

- 1.) Take an anonymous online survey that would take approximately 14 minutes.

Risks and Benefits of being in the Study: The risks involved in this study are minimal and are no more than the participant would encounter in everyday life.

This research would benefit the field of education to help school officials determine whether a single-sex environment differs from a coeducational environment and will seek to determine the discipline experiences that African American girls in single-sex classes perceive to be most beneficial to their environment.

Compensation: Your child/student will not receive any payment or incentives for taking part in this study.

Confidentiality: The records of this study will be kept private. In any sort of report, I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researcher will have access to the records.

The survey is being administered through a secure website hosted by QuestionPro and it is a completely confidential software tool. The survey does not ask for any personal individual identifiers such as name, address, and taking the survey is on a strictly voluntary basis. All data

collected will be kept in a secure location. The survey and office discipline referral data is digital and will be kept on a password protected computer.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether to allow your child/student to participate will not affect his or her current or future relations with Liberty University. If you decide to allow your child/student to participate, he or she is free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions: The researcher conducting this study is DeVonne Lampkin. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at dlampkin3@liberty.edu or at 904-764-4604. You may also contact the research's faculty advisor, Michelle Barthlow, at mjbarthlow@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Carter 134, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information to keep for your records.

Appendix H: Student Survey Opt-Out Form

Date: 05/01/2016

Dear Parents:

As a student in the School of Education at Liberty University, I am conducting research as part of the requirements for a doctoral degree. I am inviting your student to take part in a research study.

A student survey will be done at your child's school called the **Secondary Classroom Climate Assessment Instrument - Student (CCAI-S-S)**. If you allow your child to be included, they will be asked to complete an online survey based on their opinions about discipline at their school, how they get along with other students, their courses and school setting. It should only take 14 minutes for your child to finish the survey. Your child's identity will be kept completely confidential. An informed consent is attached to this letter. The informed consent covers more information about my research.

If you DO NOT want your child to complete the survey, please fill out the form below and ask them to return this it to the school's Main Office. Thank you for your support.

I do not want my son/daughter to take the **Secondary Classroom Climate Assessment Instrument - Student (CCAI-S-S)**.

STUDENT NAME (please print)	
Student I.D. Number	
Parent Name (please print)	

Parent Signature

Date

Sincerely,

Devonne Lampkin, Ed.S