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Do Early Elementary Teacher Ratings of Classroom Behavior Predict Similar Outcomes Across Demographic Groups? An Examination Using the Early Childhood Longitudinal Study Kindergarten Cohort (ECLS-K)

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Do Early Elementary Teacher Ratings of Classroom Behavior Predict Similar Outcomes Across
Demographic Groups? An Examination Using the Early Childhood Longitudinal Study
Kindergarten Cohort (ECLS-K)

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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College of Education
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Keywords: special education, grade retention, school suspension, disproportionality

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Table of Contents

| | |
|--|-----|
| List of Tables | iii |
| List of Figures | v |
| Abstract | vi |
| Chapter I: Introduction | 1 |
| Statement of the Problem | 1 |
| Theoretical Framework | 7 |
| Purpose of the Current Study | 8 |
| Source of the Data | 8 |
| Research Questions | 9 |
| Significance of the Study | 9 |
| Key Terms | 10 |
| Language | 11 |
| Chapter II: Review of the Literature | 12 |
| Historical Context: Racial Inequality in Education | 13 |
| Education Legislation: Special Education, Grade Retention, and School Suspension | 14 |
| Special education | 14 |
| Grade retention | 16 |
| School suspension | 18 |
| Teacher Ratings of Classroom Behavior | 20 |
| Approaches to learning | 21 |
| Externalizing behavior problems | 24 |
| Differences in teacher behavior ratings | 28 |
| Disproportionality in Grade Retention | 30 |
| Who is retained? | 30 |
| Outcomes of grade retention | 31 |
| Disproportionality in Special Education | 36 |
| Who is in special education? | 36 |
| Outcomes of special education placement | 38 |
| Disproportionality in School Suspension | 41 |
| Who is suspended? | 42 |
| Long-term outcomes of school suspensions | 48 |
| Summary and Aims of the Current Study | 51 |
| Chapter III: Method | 54 |
| Purpose of the Study | 54 |

| | |
|--|-----|
| Source of the Data | 55 |
| Participants | 57 |
| Data Collection Procedures | 58 |
| Attrition | 59 |
| Major Variables | 60 |
| Teacher ratings of classroom behavior | 60 |
| Demographic variables | 63 |
| School responses to students with perceived behavioral difficulties | 64 |
| Overview of Analyses | 66 |
| Preliminary analyses | 66 |
| Logistic regression analyses | 66 |
| Correlational analyses | 67 |
| Analysis of missing data | 68 |
| Chapter IV: Results | 69 |
| Preliminary Analyses | 69 |
| Descriptive analyses | 69 |
| Correlational analyses | 71 |
| Logistic Regression Analyses | 72 |
| Special education | 73 |
| Grade retention | 77 |
| School suspension | 81 |
| Correlational Analyses | 84 |
| Chapter V: Discussion | 87 |
| Teacher Ratings of Classroom Behavior Predicting School Outcomes | 87 |
| Special education | 88 |
| Grade retention | 90 |
| School suspension | 93 |
| Relationship Between Special Education, Grade Retention, and School Suspension | 95 |
| Implications for Practice | 97 |
| Implications for grade retention | 99 |
| Implications for school suspension | 101 |
| Contributions to the Literature | 102 |
| Limitations of the Current Study and Directions for Future Research | 104 |
| Summary | 107 |
| References | 109 |

List of Tables

| | | |
|-----------|--|----|
| Table 1: | Demographic Characteristics as a Percentage of the Eighth Grade Sample | 58 |
| Table 2: | Correlations of Weak Approaches to Learning at Time 1, Time 2, and Time 4 | 62 |
| Table 3: | Correlations of Externalizing Behavior Problems at Time 1, Time 2, and Time 4 | 62 |
| Table 4: | Split Half Reliability for the Teacher Social Rating Scale Scores | 63 |
| Table 5: | Descriptive Statistics for School Outcomes | 70 |
| Table 6: | Descriptive Statistics for School Outcomes by Demographic Group (n = 5,627) | 70 |
| Table 7: | Descriptive Statistics for Teacher Behavior Ratings | 71 |
| Table 8: | Mean Teacher Problem Behavior Ratings by Student Demographic Group | 71 |
| Table 9: | Correlations Between Teacher Behavior Ratings and Student Demographics (N = 5,615) | 72 |
| Table 10: | Summary of Logistic Regression for Weak Approaches to Learning Predicting Special Education Status | 75 |
| Table 11: | Summary of Logistic Regression for Externalizing Behavior Problems Predicting Special Education Status | 76 |
| Table 12: | Summary of Logistic Regression for Weak Approaches to Learning Predicting Grade Retention | 78 |
| Table 13: | Summary of Logistic Regression for Externalizing Behavior Problems Predicting Grade Retention | 79 |
| Table 14: | Summary of Logistic Regression for Weak Approaches to Learning Predicting School Suspension | 82 |
| Table 15: | Summary of Logistic Regression for Externalizing Behavior Problems Predicting School Suspension | 83 |
| Table 16: | Correlations of Special Education, Grade Retention, and School Suspension | 85 |

| | |
|---|----|
| Table 17: Cross Tabulation Frequencies of Special Education by Grade Retention (n = 5,627) | 85 |
| Table 18: Cross Tabulation Frequencies of Special Education by School Suspension (n = 5,109) | 85 |
| Table 19: Cross Tabulation Frequencies of Grade Retention by School Suspension (n = 5,109) | 86 |

List of Figures

- Figure 1: Interaction Graph of Race by Weak Approaches to Learning for Predicting Grade Retention 80
- Figure 2: Interaction Graph of Gender by Weak Approaches to Learning for Predicting Grade Retention 80
- Figure 3: Interaction Graph of Race by Weak Approaches to Learning for Predicting School Suspension 84

Abstract

Research suggests that how teachers perceive the behavior of individual children in the early years of elementary school has important implications for the school success of those youth over time (Darney et al., 2013; Hibell et al., 2010; Jimerson et al., 1997; Reinke et al., 2008). This may be because children who are of concern to teachers are often identified for practices such as grade retention and/or special education placement. Although these practices are intended to help children, they have *not* been shown to be associated with long-term positive outcomes. Rather, youth who are subject to these practices experience negative outcomes more often than their peers, including lower academic achievement, higher rates of exclusionary discipline, and lower rates of high school graduation (Darney et al., 2013; Sullivan & Bal, 2013; Stearns et al., 2007). From an educational equity standpoint, it is important to understand how early elementary teacher concerns are related to outcomes over time for children from different demographic groups. It may be that teacher concerns regarding behavior for some children (e.g., boys, children from minority backgrounds, poor children) are more likely to lead to educational practices (e.g., special education, retention) that have been associated with poor outcomes for youth. The purpose of the current study was to examine how early elementary teacher behavior ratings were related to long-term outcomes for youth and whether those relationships were similar for youth of different races, gender, and socioeconomic statuses (SES). Three research questions were posed: (1) Do teacher behavior ratings in kindergarten and first grade predict special education placement and/or grade retention by fifth grade and/or school suspension by eighth grade? (2) To what extent are the relationships between these variables moderated by student gender, race, and/or SES? (3) To what

extent are special education placement, grade retention, and school suspension related to each other? Archival data from the Early Childhood Longitudinal Study Kindergarten Cohort of 1998 (ECLS-K) were used to answer these questions. Results showed that teacher perceptions of behavior problems in early elementary school significantly predicted all three aforementioned outcomes. Of the various teacher-perceived behavior problems measured, approaches to learning (e.g., paying attention, being organized) was the most predictive. Black students with teacher-perceived weak approaches to learning were at higher risk than their White peers with weak approaches to learning for being retained and suspended. Additionally, female students with perceived weak approaches to learning were more likely to be retained than their male peers with weak approaches to learning. Special education, grade retention, and school suspension outcomes were weakly correlated with each other. The weak correlations among these outcomes suggests that youth who are perceived to be behaviorally at risk can potentially be on different paths that lead them to experience different long-term outcomes. Implications for educators, researchers, and policymakers are discussed.

Chapter I: Introduction

Statement of the Problem

The racial achievement gap has been of great concern for decades (Aud, 2011) and continues to be evidenced today. Results from the 2013 National Assessment of Educational Progress (NAEP) showed that among fourth graders, a larger proportion White students are reaching proficient benchmarks (43% mathematics, 34% reading) in comparison to Black students (17% mathematics, 15% reading) (National Center for Education Statistics; NCES, 2013). This gap is also evident among eighth grade students, where more White students (45% math, 46% reading) are meeting proficient benchmarks than their Black peers (Black 14% math, 17% reading). Because of these glaring statistics, much of the dialogue on racial disparities in education has been primarily focused on academic outcomes of ethnic minority youth (Gregory, Skiba, & Noguera, 2010). However, the achievement gap is likely to remain a problem as the discipline gap, or disproportionality in exclusionary discipline, remains a problem in education (Losen, Hodson, Keith, Morrison, & Belway, 2015).

Exclusionary discipline refers to the temporary or permanent removal of a student from the school environment due to infractions against the school's code of conduct (Noltemeyer & McLoughlin, 2012; Skiba, Shure, & Williams, 2012). Office discipline referrals, in-school suspensions, out-of-school suspensions, and expulsions are all forms of exclusionary discipline that commonly used with the intent of reducing the likelihood of the infraction occurring again. However, research has linked exclusionary discipline with negative long-term outcomes and has not been shown to deter future misbehavior. In comparison to their non-excluded peers, youth

who experience exclusionary discipline are at increased risk for academic failure, special education placement, grade retention, high school dropout, and contact with the criminal justice system (Fabelo, Thompson, Plotkin, Carmichael, Marchbanks, & Booth, 2011; Marchbanks, Blake, Booth, Carmichael, Seibert, & Fabelo, 2013; Noltemeyer & McLoughlin, 2012; Raffaele Mendez (2003); Skiba et al., 2012, Sullivan & Bal, 2013).

Disproportionality in exclusionary discipline refers to the overrepresentation of students who belong to particular racial/ethnic groups among students who receive office discipline referrals, suspensions, school arrests, and expulsion (Skiba et al., 2012). Because of the negative long-term outcomes that have been associated with exclusionary discipline in the literature, educators, researchers, and policymakers are becoming increasingly concerned with how Black youth are disproportionately subjected to punitive measures of exclusionary discipline. The Children's Defense Fund first brought this issue to light in 1975 in which they raised the question if school suspensions are helping children (Children's Defense Fund, 1975). According to national data from the Civil Rights Project at the University of California, Los Angeles, 6% of Black students were suspended in comparison to only 3% of White students in the 1972-73 school year. When Zero Tolerance Policies began to be implemented in the 1980's, students experienced not only an overall increase in suspension rates but also a substantial increase in the proportion of Black students being suspended in comparison to White Students (Losen, Hodson, Keith, Morrison, & Belway, 2015). Zero Tolerance policies refer to school policies that were implemented to require harsher punishments for students for all offenses against the school code of conduct (Skiba, 2000). According to Losen and colleagues (2015), 10% of Black students were suspended in comparison to only 4% White students in the 1988-1989 school year. Over the years, the discipline gap continued to widen significantly. In the 2011-2012 school year, 16%

of Black students were suspended in comparison to only 5% of White students. Although suspension rates for White students have remained relatively stable over the past 25 years, suspensions rates for Black students have risen dramatically (Losen et al., 2015). The data from these trends suggest that Black students have been disproportionately impacted by the effects of Zero Tolerance Policies in comparison to White students.

In addition to Black students, students with disabilities have been disproportionately subjected to school suspensions in comparison to students without disabilities. In the 2009-2010 school year, nearly twice as many students with disabilities were suspended as their non-disabled peers (13% and 7%, respectively; Losen & Gillespie, 2012). Even more alarming is that when race and student disability are considered, the discipline gap widens even more. In the same school year, approximately 25% of Black students with disabilities were suspended in comparison to 9% of White students with disabilities. These findings are especially concerning because this disproportionality is occurring despite procedural safeguards intended to provide students with behavioral concerns with behavioral assessments and behavioral intervention plans to ensure they get the support they need, as well as federal laws such as the Individuals with Disabilities Education Act (2004) that require school districts to analyze their data to determine if disparities are present and implement interventions to reduce those disparities (Losen & Gillespie, 2012; Sullivan & Bal, 2013).

An important link has been suggested between school suspensions and low academic achievement in that youth who experience repeated suspensions seem to become entrenched in a vicious cycle. This cycle includes experiencing academic failure, disengaging from school, engaging in behavior that results in exclusionary discipline, missing out on academic engaged time, and ultimately falling behind their peers academically (Arcia, 2006; Gregory Skiba, &

Noguera, 2010). It has been suggested that this cycle contributes to disparities in high school graduation rates for students of different ethnic groups. A recent report released by the Schott Foundation for Public Education (2015) reported that the national rate for high school graduation during the 2012-13 school year for White males was 80%, followed by 65% for Latino males, and then only 59% for Black males. Additional research exploring risk factors for exclusionary discipline practices is needed because of this phenomenon's hypothesized contribution to maintaining the achievement gap (Gregory & Skiba, 2010).

In striving to understand predictors of exclusionary discipline, special attention must be drawn to school practices that are used with the intent of addressing academic or behavioral problems among individual youth. Failure to effectively address the academic and behavioral needs of children with early learning and behavior problems could be a possible contributing factor to disciplinary disproportionality. Youth who are identified with behavioral issues at an early age are at highest risk for school suspensions (Darney, Reinke, Herman, Stormont, & Ialongo, 2013; Reinke, Herman, Petras, & Ialongo, 2008), which raises the important questions of how schools respond to these youth; whether these responses vary by the child's race, gender, and social class; and how these responses impact children over time.

Two commonly used practices with youth who do not meet behavioral standards in school are placement in special education and grade retention (Darney, Reinke, Herman, Stormont, & Ialongo, 2013; Ferri & Conroy, 2002; Frey, 2005). Previous research has shown that the decisions made by school staff to retain students or place them in special education are disproportionately applied to students of certain demographic groups: students who are male, Black, Latino, or who come from low-income families are at higher risk for special education placement and grade retention (Fierros & Conroy, 2002; Jimerson et al., 1997; Skiba, Poloni-

Staudinger, Simmons, Feggins-Azziz, & Chung, 2005; Sullivan & Bal, 2013; Warren et al., 2014). Although the use of special education and grade retention is intended to improve student outcomes by providing students with specialized instruction or an additional year of schooling, youth who experience these practices have not been shown to typically experience positive long-term outcomes (Jimerson et al., 1997; Moller, Stearns, Blau, & Land, 2006; Morgan, Frisco, Farkas, & Hibel, 2008; Raffaele Mendez et al., 2014; Stearns, Moller, Blau, & Potochnick, 2007; Sullivan & Bal, 2013). Studies have shown that placement in special education and experiencing grade retention are linked to academic failure, poor socio-emotional outcomes, school suspensions, and school dropout. The failure of schools to intervene early and provide empirically-supported interventions to address early childhood behavioral challenges may put children with early behavioral difficulties on a path that increases the likelihood of both underachievement and exclusionary discipline.

Wright, Morgan, Coyne, Beaver, and Barnes (2014) conducted a study using the Early Childhood Longitudinal Study Kindergarten Cohort of 1998 (ECLS-K) to explore how socioeconomic status, school context, and individual student behavior contributes to the racial exclusionary discipline gap. The ECLS-K sampled over 21,000 children across the United States with data collected across 7 time points between 1998 and 2007. Prior problem behavior was measured using a sum of the kindergarten, first-, and third-grade teachers' responses to the ECLS-K Social Rating Scale (Teacher-SRS). Responses on the following four SRS scales were used: approaches to learning, interpersonal skills, self-control, and externalizing problem behavior. Child delinquency was measured using maternal responses to three items on the eighth-grade parent interview (i.e., To extent does your child cheat, steal, and fight?). School suspension was measured using eighth grade parents' responses to whether or not their child had

ever received a suspension. Using logistic regression, Wright and colleagues (2014) found that the odds of being suspended were the highest for Black males (odds ratio: 3.78); however, including a measure of prior problem behavior reduced the differences between Black and White students to statistical insignificance (odds ratio: 1.20). The authors interpreted their findings to mean that the odds differentials in suspensions are an outcome of pre-existing problem behaviors that are exhibited in the classroom setting, stating:

Thus, our results indicate that odds differentials in suspensions are likely produced by pre-existing behavioral problems of youth that are imported into the classroom, that cause classroom disruptions, and that trigger disciplinary measures by teachers and school officials. Differences in rates of suspension between racial groups thus appear to be a function of differences in problem behaviors that emerge early in life, that remain relatively stable over time, and that materialize in the classroom. (Wright et al., 2014, p. 263).

Wright et al.'s (2014) conclusions are predicated on the idea that teacher ratings of behavior are reliable and valid across different groups of students. This may or may not be the case. Indeed, research suggests that teachers may have different perceptions or thresholds for what is considered to be problem behavior (Shaywitz, Shaywitz, Fletcher, & Escobar, 1990). Additionally, student race has been shown to influence teacher perceptions of behavior, with Black students often receiving harsher school discipline for committing the same behavioral infractions as their White peers (Okonofua & Eberhardt, 2015; Skiba, Horner, Chung, Rausch, May, & Tobin, 2011).

The current study aims to delve further into the issues addressed by Wright and colleagues (2014) by examining how student demographics relate to school responses to youth

with perceived early behavioral problems (i.e., special education placement, grade retentions, school suspensions), and to investigate the extent those practices relate to each other. In the current study, it is hypothesized that teacher perceptions of student behavior not only relate to school discipline outcomes but also relate to student referrals for special education placement or grade retentions. These two variables are included within this study because students who are placed in special education or who repeat a grade are more likely to experience poorer academic and behavioral outcomes over time and are more likely to be suspended from school (Jimerson, Carlson, Rotert, Egeland, & Sroufe, 1997; Katsiyannis, Thompson, Barrett, & Kingree, 2012; Marchbanks et al., 2013; Raffaele Mendez, Kim, Ferron, & Woods, 2014; Sullivan & Bal, 2013; Sullivan, Van Norman, & Klingbiel, 2014).

Theoretical Framework

Researchers have invoked theories from sociology, criminology, and political science to frame the way we examine disproportionality (Skiba, Shure, & Williams, 2012). For this particular study, a structural inequity theory lens will be used to frame and interpret the research findings. According to Sullivan and Artiles (2011), structural theory provides researchers, educators, and policymakers with a framework for identifying factors that contribute to disproportionality within education. The authors point out that there are certain demographic groups who are perceived to be more intelligent or better behaved (e.g., White students) than other demographic groups (e.g., ethnic minority students, poor students). Additionally, there are school policies and practices that systematically advantage those students above others in terms of school outcomes, whether this is intentional or unintentional. Structural theory is applicable to disproportionality in special education, grade retention, and school disciplinary practices because it suggests that within education there are social systems that exist that lead to

differences in how certain groups are treated (Sullivan & Artiles, 2011). Through this lens, the study will examine the possibility of differential treatment for students who have early problems with behavior by race, gender, and socioeconomic status.

Purpose of the Current Study

The purpose of this study was to explore the outcomes of youth who are perceived as having behavioral problems in early elementary school. More specifically, this study will focus on the relationship between teacher ratings of classroom behavior in early elementary school, decisions made by school staff by the end of elementary school (i.e., special education placement, grade retention), and whether the student receives at least one suspension by eighth grade. Numerous studies have documented that Black students are more likely to experience poorer school outcomes in comparison to their White peers (NCES, 2013). Therefore, this study explored how these outcomes vary by race (Black and White students), gender, and socioeconomic status.

Source of the Data

Archival data obtained from the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K) were used in this study. The ECLS-K was conducted by the U.S. Department of Education's National Center for Education Statistics (NCES) to gather nationwide data on children's early school experiences and follow them through middle school. The ECLS-K database consists of data from multiple sources including: child, teacher, parent, and school administrator surveys; direct child assessments; and school data. The ECLS-K allows researchers to explore a vast range of child, family, community, and school factors that are linked to school performance. Additional information on the ECLS-K is provided in Chapter 3.

Research Questions

The following questions were answered in this study:

1. Controlling for race, gender, and poverty status, to what extent do teacher-reported early problems with classroom behavior predict:
 - a. Special education status in fifth grade?
 - b. Experiencing at least one grade retention by fifth grade?
 - c. Receiving at least one school suspension (including in- and out-of school suspension) by eighth grade?
2. To what extent do student demographics (i.e., race, gender, and poverty status separately) moderate the aforementioned relationships?
3. To what extent do special education status in fifth grade, experiencing at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade relate to each other?

Significance of the Study

This study provided empirical data on the relationships between teacher-reported early problems with classroom behavior (kindergarten and first grade) and three school outcomes: receiving special education services in fifth grade, retained by the end of elementary school (fifth grade), and receiving at least one school suspension by the end of middle school (eighth grade). Teacher ratings of classroom behavior problems were measured as a continuous variable to capture the degree to which the child is perceived by teachers to exhibit behavior problems. The present study contributed to the literature on investigating disproportionality using a nationally representative sample. These findings would suggest the need for reform to improve educational outcomes for youth who are observed by teachers as having behavioral problems at an early age.

Key Terms

The following key terms important to understand within the context of this study:

1. **Special Education:** “specially designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability” (IDEA Sec. 300.39 Special education, 2004)
2. **Grade Retention:** the practice of having a student repeat a grade in school due to failure to meet academic benchmarks or a lack of academic progress (Warren et al., 2014)
3. **Social Promotion:** the practice of advancing a student to the next grade level even though he or she has not met grade-level expectations (Frey, 2005)
4. **Exclusionary Discipline:** the practice of physically removing a student from the school environment temporarily (i.e., in-school suspension, out-of school suspension) or permanently (i.e., expulsion) due to the student’s infractions against the school’s code of conduct (Noltemeyer & McLoughlin, 2012)
5. **Disproportionality:** “the representation of a group in a category that exceeds our expectations for that group, or differs substantially from the representation of others in that category” (Skiba, Simmons, Ritter, Gibb, Rausch, Cuadrado, & Chung, 2008, p. 266)
6. **Special Education Disproportionality:** “the over or underrepresentation of underserved racial or ethnic groups in special education as compared to another racial or ethnic group, or all other groups combined” (Oswald, Coutinho, Best, & Singh, 1999, p. 198)
7. **Disciplinary Disproportionality:** the disproportionately high rates at which students who belong to racial/ethnic groups are more likely to receive to office discipline referrals, suspensions, school arrests, and expulsion (Skiba, Shure, & Wililams, 2012). This term is also referred to as the discipline gap.

- 8. School to Prison Pipeline:** the failure of the school system to meet the educational and social development needs of at-risk children, pushing them out of schools and into the juvenile/criminal justice systems (American Civil Liberties Union, n.d.; Kim, Losen, & Hewitt, 2010; Tulman & Weck, 2009).

Language

Multiple terms have been found acceptable to use to describe different racial/ethnic groups (Black or African American, White or Caucasian) (American Psychological Association, 2010). According to the 2013 Gallup poll, the majority (65%) of Black individuals reported no preference for being referred to as “Black” or “African American”. The divide between individuals who do have a preference is even (17% each). For this study, “Black” and “White” are the terms used to consistently describe these two racial groups of people. The term “Black” was chosen because this was the term that was most frequently used to describe participants in many of the research studies cited in this paper, and because this term is more inclusive of individuals who identify as African American (i.e., descend from African slaves in the United States) and individuals who come from families who immigrated from countries in the Caribbean and the African continent (Jackson & Cothran, 2003).

Chapter II: Review of the Literature

Disproportionality in exclusionary discipline, special education, and grade retention are of utmost concern because students who are subjected to these practices are at an increased likelihood for experiencing lower quality education, academic failure, and school dropout (Ferri & Conroy, 2002; Skiba et al., 2005, Stearns et al., 2007; Sullivan & Bal, 2013). These school practices are also concerning because scholars have hypothesized that they function as part of the school-to-prison-pipeline, which pushes students out of school and increases their risk of contact with the juvenile justice system (Fabelo et al., 2011; Kim et al., 2010; Skiba et al., 2012; Townsend Walker, 2012; Tulman & Weck, 2009). Exclusionary discipline has an overall disproportionate impact on Black students, but other student characteristics in combination with student race potentially increase the risk for exclusionary discipline: being male, having a lower socioeconomic status (SES) background, having a documented disability, or being rated as having higher levels of problem behaviors (Bowman-Perrot et al., 2013; Losen & Gillespie, 2012; Raffaele Mendez, 2003; Skiba et al., 2012). The racial achievement gap between Black and White students remains a dire problem within education, as Black students continue to be at risk for grade retention and significantly overrepresented in special education and exclusionary discipline.

This chapter presents the historical context for racial inequality in education and education legislation, followed by a review of the empirical literature on disproportionality in special education, grade retention, and exclusionary discipline. The chapter concludes with implications for long-term outcomes for students subjected to those practices.

Historical Context: Racial Inequality in Education

The United States has a longstanding history of depriving ethnic minority individuals of equal opportunities to learn. In the late 19th century, American Indian, Chinese American, and Latino students attended segregated public schools where the quality of education they received was sub-par in comparison to what was offered in the schools White students attended (Noltemeyer, Mujic, & McLoughlin, 2012). For Black individuals, their experiences with inequality in education dates even further back in time to slavery. During the time of slavery (i.e., approximately the 18th century through 1865), legislation made it illegal for Black individuals to learn how to read or write. It was not until after the Civil War that Black students could attend public schools. Under Jim Crow laws (1890-1965), the “separate-but-equal” philosophy permeated widely throughout the country where racial segregation was mandated. The U.S. Supreme Court ruling of Plessy v. Ferguson (1896) reinforced this philosophy as it related to maintaining segregated schools. However, this doctrine was flawed; Black children attended schools that had inferior quality, a lack of funding, overcrowded classrooms, hand-me-down textbooks, unqualified teachers, and ill-equipped school buildings to support its students (Noltemeyer, Mujic, & McLoughlin, 2012; Sandomierski, 2011). Some Black students even experienced challenges locating a segregated school they could attend. In 1954, these injustices in education were addressed through Brown v. Board of Education (1954), which overturned Plessy v. Ferguson and declared that segregated schools are unconstitutional, and that “separate” schools were not “equal” (Noltemeyer, et al., 2012). This ruling led to the racial desegregation of public schools.

Although Brown v. Board of Education (1954) was a step toward combating racial injustices in education, the process of desegregating schools was often met with resistance from

White individuals, especially those living in the south (Noltemeyer, et al., 2012). Black students were often subjected to physical and emotional abuse when attempting to attend desegregated schools. Some incidences such as those that occurred in Little Rock, Arkansas required military force and U.S. Marshals to protect students from harm. Following the Brown ruling, civil rights advances took place to reinforce equality for all. The Federal Civil Rights Act of 1964 forbade federally funded programs from discriminating due to race, national origin, or gender; this allowed the U.S. Department of Justice to enforce civil rights in education by withholding federal funds from school districts who discriminated against Black students. The Department of Education Office for Civil Rights (OCR) was also established to promote and ensure equal access to education (Noltemeyer et al., 2012).

Education Legislation: Special Education, Grade Retention, and School Suspension

Special education. In addition to ethnic minorities, individuals with disabilities have a history of being discriminated against within the United States. For example, people with disabilities have historically been prevented from having access to high quality education (Noltemeyer, et al., 2012). Intelligence testing began to greatly influence education in the early 20th century; these types of standardized measurements were used to evaluate a student's perceived ability, which led to students to being grouped together based on these assessment results (Frey, 2005). American psychologists Lewis Terman and Henry Herbert Goddard supported the use of an "intelligence quotient" (IQ) to separate students and limit school and vocational options by ability (Frey, 2005). However, Alfred Binet, a French psychologist who developed the first intelligence test, originally intended intelligence testing to be used to identify students who needed additional specialized supports, not to permanently segregate low-performing students from their peers (Frey, 2005). Additionally, Binet believed that intelligence

could be influenced by instruction and intelligence in itself was not a fixed construct (Frey, 2005).

Over the years, legislation has been passed to promote the education of individuals with disabilities. For example, Section 504 of the Vocational Rehabilitation Act of 1973 protects students from experiencing discrimination based on a disability (Noltemeyer et al., 2012). Section 504 was extended in 1990 with the American with Disabilities Act of 1990 (ADA), which requires public and private organizations to provide accommodations and modifications for individuals with disabilities. No Child Left Behind (2001) (NCLB) also has strongly impacted education for students with disabilities by requiring districts to hold all students, including those with disabilities, accountable for becoming proficient in reading and math.

Noltemeyer and colleagues (2012) propose that the Education for All Handicapped Children Act of 1975 (PL 94-142) has had the strongest influence in education by requiring schools to identify students with disabilities and provide them with a free and appropriate education (FAPE) within the least restrictive environment. This legislation also requires that these students be provided with an Individualized Education Plan (IEP) to meet their unique needs. This piece of legislation was reauthorized in 1990 and 2004 and is currently known as the Individuals with Disabilities Education Act (IDEA). IDEA (2004) includes regulations addressing the growing concern of the overrepresentation of culturally and linguistically diverse students in special education, also known as special education disproportionality (Noltemeyer et al., 2012). This legislation mandates that states and school districts report the race/ethnicity of their students in special education; establish whether disproportionality exists; and address any policies or procedures contributing to the identified disproportionality (Bal, Sullivan, & Harper, 2013). In response to the concern of discipline disproportionality for students with disabilities,

IDEA (2004) includes statutes and regulations to specifically address this issue. Procedures are outlined to ensure that students with disabilities do not experience disciplinary exclusion in a discriminatory manner and that this does not lead to a denial of educational services. However, this does not prohibit students from receiving disciplinary removal (Achilles, McLaughlin, & Croninger, 2007). Although IDEA (2004) demonstrates policymakers' initiatives to reduce disproportionality in special education and exclusionary discipline, disproportionality continues to persist today within these practices as well as in grade retention.

Grade retention. Like disproportionality in school discipline, disproportionality in grade retention for culturally and linguistically diverse students also is of growing concern for educators. Historically, grade retention has been known as an intervention for students who have failed to achieve (Frey, 2005). Grade retention practices began to rise after the arrival of the Industrial Revolution and the Civil War (i.e., mid 19th century), when compulsory education laws ensured that previously disenfranchised groups (i.e., freed slaves, immigrants, girls) would receive an education (Frey, 2005). By the early 20th century, some estimates indicated that retention rates were as high as nearly 50%, with nearly 20% of all students dropping out of school by eighth grade (Holmes & Matthews, 1984; Johnson, Merrell, & Stover, 1990). Homogenous grouping by student achievement (e.g., reading groups) became an increasingly popular instructional arrangement so that high- and low-achieving students would receive different materials (Frey, 2005).

During the 1970s, the alternative to grade retention, "social promotion", became a more popular practice (Frey, 2005). Social promotion refers to when a student advances to the next grade level without having demonstrating mastery of the material covered in the previous grade. However, during the 1980's, public opinion polls showed that an increasing number of people

believed that being promoted to the next grade level should depend on mastering grade-level concepts. Grade retention policies on the state and district level began to make it less likely a student would be socially promoted.

Meisels and Liaw (1993) analyzed data from the base year (eighth grade) of the National Education Longitudinal Study of 1988 (NELS: 88), a nationally representative sample of students in eighth grade, to examine the characteristics of students who were retained at least once from kindergarten through eighth grade. Of the 16,623 students in the sample, 19.3% had experienced at least one grade retention. However, differences in rates of grade retention emerged across different ethnic groups. A larger proportion of Black and Hispanic students were retained (29.9% and 25.2% respectively) in comparison to their White peers (17.2%). Boys also were at a greater risk for grade retention (24%), in comparison to girls (15.3%). In regard to socioeconomic status, 33.9% of the students in the lowest quartile had been retained, whereas only 8.6% of students of higher socioeconomic backgrounds were retained (Meisels & Liaw, 1993). These findings show how students of certain demographic groups (i.e., Black, Hispanic, male, low SES) were overrepresented in grade retention. The trends in this sample are also consistent with the previously described rise in grade retentions during the 1980s (Frey, 2005).

Policies and legislation relating to accountability and high-stakes testing appeared to contribute to the rise in grade retentions during the 1990's. According to the Center for Policy Research in Education, in 1990, 6% of students were retained each year, and by 1995, the Bureau of the Census reported the rate had risen to 13.3% of students (Bureau of the Census, 1995; McMillen & Kaufman, 1993). NCLB (2001), which mandates that students must make adequate yearly progress on standardized achievement tests, has influenced the enactment of many state and district policies that require students to meet certain criteria to be promoted at key grade

levels (e.g., third, fifth, and eighth grade) (Reschly & Christenson, 2013). Throughout the 1990s, grade retention continued to be disproportionately applied to ethnic minority students (Warren et al., 2014). The potential contribution of disproportionality in special education and grade retention to disproportionality in school discipline was further explored within this study.

School suspension. The overrepresentation of Black students in exclusionary disciplinary practices has been well documented in the literature for decades. The Children’s Defense Fund (1975), a non-profit child advocacy organization, was the first organization to bring this issue to national attention; they highlighted that in comparison to White students, Black students were two to three times more likely to be suspended from school (Gregory, et al., 2010). After the Children’s Defense Fund (1975) released this information, multiple studies have been conducted to show that exclusionary disproportionality continues to be a major problem within our education system.

A rise in students experiencing disciplinary actions has often been attributed to the enactment of zero tolerance policies (Skiba, 2000). As part of the federal drug policy in the 1980s, zero tolerance was included to send a message that certain behaviors would not be permitted; all offenses, including minor ones, would therefore be severely punished (Skiba, 2000). Zero tolerance policies became more widespread within the school setting during the late 1980’s and early 1990’s. Educators feared that violence, gangs, weapons, and drugs were on the rise in schools and found value in the no-nonsense response of zero tolerance to mandate harsher consequences for students who committed both major and minor violations of school conduct (Skiba, 2000; Skiba, 2009). In 1989, school districts in California, New York, and Kentucky began adopting zero tolerance policies in which students were expelled for gang-related activity, fighting, and drugs. Zero tolerance policies had been adopted in school districts across the

nation by 1993 and also began to include additional infractions such as smoking and disruption. There is limited evidence to support that these policies are effective for improving student behavior or school safety (Skiba, 2000). On the surface level, separating disruptive students from school via suspension and expulsion seems to be a short-term solution for addressing school disciplinary problems. However, the long-term implications of exclusionary discipline pose a dilemma for administrators and educators. Previous research has consistently shown that academic engagement is one of the strongest predictors of academic achievement; therefore, removing students from the opportunity to learn will have negative implications for the academic success of students who are subjected to exclusionary discipline (Gregory et al., 2010; Skiba et al., 2009).

The previously summarized history of racial inequality and legislation in education shows there are several systemic factors that contribute to disproportionality. These educational policies are important within the context of the current study because these policy changes may have impacted outcomes for youth who participated in this study over time. Data used in the current study were obtained during 1998-2001 (when students were in kindergarten and first grade), 2004 (when students were in fifth grade), and 2007 (when students were in eighth grade). Therefore, policy changes such as the adaptation of zero tolerance policies in the 1990s, NCLB (2001), and IDEA (2004) would have an impact on long-term outcomes for youth who are perceived as exhibiting behavioral problems.

The following section further explores another factor potentially contributing to disproportionality, namely student's perceived levels of problem behaviors by teachers. Because teachers are the primary individuals in schools who identify youth as having both academic and

behavioral problems, it is important to determine how the child's race, gender, and SES may influence teacher perceptions of children. This is explored in the following section.

Teacher Ratings of Classroom Behavior

Youth who are perceived as having behavioral problems in school are at a much greater risk than their peers for experiencing poorer educational outcomes such as poor academic achievement, placement in special education, grade retention, school suspension, and school dropout (Darney et al., 2013; Jimerson, et al., 1997; Jones, Dodge, Foster, Nix, & Conduct Problems Prevention Research Group. 2002; Reinke, Herman, Petras, & Ialongo, 2008, Vitaro, Brendgen, & Tremblay, 1999). Long-term outcomes of being placed in special education, retained, or suspended are reviewed in later sections focusing on disproportionality. Teachers' perceptions of students' levels of problem behavior are important to consider within the context of disproportionality because these perceptions can influence their decision to make a referral in response to a student's misbehavior. Previous studies have documented that teachers' ratings of problem behaviors influence the special education, grade retention, and discipline referral process (MacMillan, Gresham, Lopez, & Bocian, 1996; Shaywitz et al., 1990; Shinn, Tindal, & Spira, 1987; Wehmeyer & Schwartz, 2001).

Teachers play a very important role in the special education referral process. Children with more significant or impairing disabilities are more easily identified as candidates for special education services because these youth may have co-occurring physical, sensory, or other medical problems that lead to referral and diagnosis relying on more objective measures (Shinn, et al., 1987; Sullivan & Bal, 2013). Youth with more severe disabilities comprise a smaller proportion of students who receive special education services, thus these disabilities are known as low-incidence disabilities (e.g., autism, intellectual disability) (Sullivan & Bal, 2013). A

larger proportion of students receiving special education services is categorized as having mild disabilities, in which subjective indicators may play a role in the referral process. These disabilities are referred to as high-incidence disabilities (e.g., specific learning disability, speech/language impairment) (Sullivan & Bal, 2013; Wehmeyer & Schwartz, 2001). Teachers play a more prominent role in the referral process for less significant disabilities, and therefore a student's behavior could potentially influence a teacher's perception on the need for special education services (Wehmeyer & Schwartz, 2001).

Two types of problem behaviors will be focused on within this study: approaches to learning and externalizing behavior problems. Teacher ratings of these classroom behaviors have been found to be predictive of various school outcomes. The following sections will review empirical literature on long-term outcomes of early teacher behavior ratings.

Approaches to learning. Approaches to learning refers to a set of behaviors that facilitate learning when children engage in academic tasks (McDermott, Leigh, & Perry, 2002). Approaches to learning includes a variety of learning behaviors such as task initiation, motivation, persistence, flexibility, and self-regulating one's emotions behaviors, and attention (Li-Grinning, Vortuba-Drzl, Maldonado-Carreño, & Haas, 2010; McWayne, McDermott & Fantuzzo, 2004). Studies have found that higher scores on measures of approaches to learning are predictive of being successful in school (Li-Grinning et al., 2010; McClelland, Acock, & Morrison, 2006; McWayne et al., 2004).

Approaches to learning is very similar to the construct of learning-related skills, which measures behaviors such as self-control, staying on task, working independently, organizing work materials, following directions, and participating appropriately in groups (McClelland et al., 2006). McClelland and colleagues (2006) conducted a study with a sample of 538 children to

investigate how learning-related skills in kindergarten predicted trajectories of academic achievement through sixth grade. Learning-related skills were measured using the Cooper-Farran Behavioral Rating Scales for teachers (CFBRS; Cooper & Farran, 1991). The researchers found that when controlling for student characteristics (e.g., age, ethnicity) learning-related skills in kindergarten significantly predicted reading and math skills from kindergarten through sixth grade. Children with teacher ratings of poorer learning-related skills in kindergarten scored significantly lower on math and reading assessments across elementary school. The authors noted that the gap in academic achievement between students with high and low learning-related skills widened from kindergarten to second grade. In this study, the achievement gap remained between third and sixth grade demonstrating that youth with learning-related skills were not able to “catch up” to their peers (McClelland et al., 2006). These findings suggest that demonstrating positive learning behaviors at an early age can have lasting impact on student achievement throughout elementary school.

A similar research study using the ECLS-K ($n = 10,666$) explored the extent to which early approaches to learning predicted reading and math trajectories from kindergarten through fifth grade (Li-Grinning et al., 2010). Using growth curve modeling, the researchers found that children with higher approaches to learning scores in kindergarten demonstrated larger growth rates in academic achievement in comparison to their peers with lower approaches to learning. When examining two-way interactions between approaches to learning and children’s demographics, the researchers found that children’s academic trajectories did not vary as a function of race or socioeconomic status, however, it did vary by gender. Higher teacher ratings of approaches to learning were predictive of significantly better math scores for girls, and modestly better reading scores for boys. Li-Grinning and colleagues (2010) pointed out that

studies have shown parents and teachers tend to spend more time fostering reading skills for girls, and math skills for boys. Perhaps being rated higher as having skills that facilitate learning served as a protective factor against the stereotypes associated with gender and achievement (Li-Grinning et al., 2010).

The findings of these studies demonstrate that there is an association between approaches to learning and academic achievement over time. It is important to consider this relationship within the context of the current study because students with lower academic achievement are more likely to experience special education, grade retention, or school suspensions (Gregory et al., 2010; Jimerson et al., 1997; Stearns et al., 2007; Sullivan & Bal, 2013;). Therefore, children with lower approaches to learning scores may be at risk for experiencing those outcomes. Using a sample of 11,138 from the ECLS-K, Hibell and colleagues (2010) investigated predictors of special education placement. In this study, receiving higher approaches to learning ratings predicted being significantly less likely to receive special education services by fifth grade. Additionally, statistically controlling for behavior changed the estimates for Black students being placed in special education. In their baseline model, Black students were significantly more likely to be placed into special education, however when statistically controlling for approaches to learning and externalizing behavior Black students were significantly less likely to be placed in special education. These findings suggest that more research is needed to understand the extent to which perceptions of classroom behavior play a role in how youth of different demographic backgrounds are placed into special education. The research on how approaches to learning predicts grade retention and school suspensions is limited, and therefore the current study aims to contribute to the literature exploring these relationships.

Externalizing problem behaviors. Externalizing behaviors are characterized by problem behaviors such as aggression, impulsivity, over-activity, and disruptiveness (Hinshaw, 1992). In contrast to children who are rated as having weaker approaches to learning, externalizing behavior problems may be more challenging for the teachers within the classroom setting because students seen as exhibiting such problem behavior may appear to be more disruptive to the learning environment and difficult to manage. Therefore, it is important to explore the role in which perceptions externalizing behaviors contributes to risk for special education, grade retention, and school suspension.

MacMillan and colleagues (1996) investigated the pre-referral process for special education and explored differences by ethnicity and gender using a sample of 150 students in Grade 2 through Grade 4. All students within this sample were referred by teacher to Student Study Teams (SST) for pre-referral interventions. When looking at teacher ratings of behavior, significant differences emerged by gender and ethnicity. In comparison to female students, male students received significantly higher ratings of externalizing problem behaviors, and in comparison to Hispanic students (but not White students), Black students were rated as significantly higher on conduct problems and hyperactivity. The authors noted that patterns of poor academic achievement co-occurred with more severe externalizing behavior problems for Black students and male students, but this pattern was not present for other students. No interaction effects were found between ethnicity and gender on any of the outcome variables. The findings of this study showed that Black or male students with higher teacher ratings of problem behaviors and poor achievement were the students who were most likely to be referred by their teachers to the SST for pre-referral interventions.

The researchers noted that it was unknown in this study whether Black and male students actually had higher levels of problem behaviors than other students since there was no direct observation check on teacher ratings (MacMillan et al., 1996). It is important to note that there is some degree of subjectivity in teacher ratings of behavior; some teachers may even have different thresholds for the magnitude of behavioral problems that would need to be present to prompt a referral (Shaywitz et al., 1990). Consistent with these findings, Jones and colleagues (2002) investigated long-term outcomes for 463 youth identified as having conduct problems in kindergarten. Children who were rated by parents and teachers as being “high risk” (i.e., the top 10% with highest ratings of conduct problems) in kindergarten were more likely to receive services for emotional or behavioral problems and special education, and, to a lesser extent, grade retention by the age of 12 (Jones et al., 2002).

Darney et al. (2013) and Reinke et al. (2008) used longitudinal data from the Prevention Intervention Research Center at Johns Hopkins University to investigate long-term outcomes of youth with academic and behavioral problems in first grade. Distal outcomes for these youth were measured in sixth (Reinke et al., 2008) and twelfth grades (Darney et al., 2013). The first grade sample consisted of 678 students who were predominantly Black (86%) with a low SES background (69% free or reduced price lunch). Latent class analysis (LCA) was used to identify the smallest number of classes accurately defining the correlation between five indicators derived from the Teacher Observation of Classroom Adaptation-Revised (TOCA-R; Werthamer-Larsson, Kellam, & Wheeler, 1991) and the Comprehensive Test of Basic Skills 4 (CTBS, 1990): Aggressive/Disruptive Behavior subscale, Oppositional Behavior subscale, Attention/Concentration Problems subscale, as well as Total Reading and Total Math scores. Through LCA, four classes of students were identified: Co-occurring Academic and Behavior

Problems, Academic Problems Only, Behavior Problems Only, and No Problems (Darney et al., 2013; Reinke et al., 2008). Of note, the Behavior Problems Only class was not identified for girls.

When examining sixth grade outcomes, the results of the study conducted by Reinke and colleagues indicated that boys in the Behavior Problems Only class were five times more likely to be rated as having higher levels of conduct problems, and were three times more likely to experience a school suspension. Across both genders, students in the Co-occurring Academic and Behavior Problems class were the most likely to experience negative outcomes in sixth grade in comparison to the No Problems class. Both boys and girls in this class were more likely to have poor or failing grades, teacher ratings of higher levels of conduct problems, and boys were more likely to report affiliation with deviant peers. Remarkably, boys and girls were in this class were 11 times more likely to receive special education services, and boys were seven times more likely to be suspended from school by sixth grade.

Darney et al. (2013) extended this study to explore distal outcomes in twelfth grade. In this study, boys and girls in the Co-occurring Academic and Behavior Problems class were not only more likely to receive special education services and attain poorer grades, but they also were more likely to use mental health services, drop out of high school, and have a criminal arrest. Additionally, some gender differences were present for twelfth grade outcomes. Boys in the Co-occurring class were 16 times more likely to receive special education, whereas girls were only four times as likely to receive those services. Girls in the Academic Problems and Co-occurring classes were significantly more likely to receive a school suspension than girls in the No Problem class. When looking at boys, there were no differences among the four problem classes with regard to (a) having experienced a suspension, or (b) peer deviant affiliation.

However, compared to the No Problems class, those in the Behavior Only class were three times as likely to have experienced a criminal arrest.

A limitation of the study conducted by Darney and colleagues (2013) and Reinke and colleagues (2008) was that their analyses focused on gender differences in outcomes without also focusing on race or class differences. Morgan, Farkas, and Wu (2009) analyzed a sample of 4,613 children from the ECLS-K to examine kindergarten predictors of externalizing behavior problems in third and fifth grade. The results of this study indicated that children with high teacher ratings of externalizing behaviors in kindergarten were 4 times as likely to be rated as having externalizing problems in third and fifth grade. These findings suggest that youth who are identified as having these behavior problems at an early age are at risk for demonstrating these behaviors over time in elementary school. When controlling for externalizing behaviors in kindergarten, children who were, male, of a low socioeconomic background, or Black were significantly more likely to be rated as demonstrating externalizing behaviors in third and fifth grade. This suggests that certain groups of children are at an increased likelihood of being perceived as having externalizing behavior problems despite teacher ratings at school entry.

Youth who exhibit behavioral problems in early elementary school are also at risk for repeating a grade. Jimerson and colleagues (1997) investigated characteristics of retained children using a longitudinal sample of 190 children in kindergarten through third grade from the Minnesota Mother-Child Interaction Project. Retained children in the sample were compared to a group of low-achieving students who were socially promoted to the next grade. In regard to demographic characteristics, chi-square analyses resulted in significant differences in demographic group characteristics between the retained and low-achieving socially promoted students, with the retained group consisting of a significantly higher proportion of males (76%)

than the low-achieving promoted group (56%). The authors did not report differences in proportion of minority students in each group. A one-way analysis of variance (ANOVA) revealed there were no significant differences between the socially promoted and retained students on achievement and intelligence tests. However, teachers rated students who had been retained as having higher levels of maladjusted behaviors, emotional difficulties (e.g., lower confidence) and lower peer acceptance. The authors suggested behavioral variables may be a contributing factor in the decision to retain a child. Difficulties with behavior, not poor academic achievement, distinguish retained children as being perceived as poor students. In another study conducted by Blair (2001) among Black children, those with higher ratings of externalizing behavior problems at age 5 were also at risk for being retained. The findings of these studies demonstrated that children with behavioral problems are more likely to be perceived as needing to be retained.

The aforementioned studies have provided evidence that youth with externalizing behavior problems are more likely to be placed in special education, retained, or suspended (Blair, 2001; Darney et al., 2013; Jimerson et al., 1997; Jones et al., 2002; MacMillan et al., 1996; Reinke et al., 2008). Additionally, these youth are at increased risk for experiencing negative long-term outcomes such as academic failure, school dropout, unemployment, and incarceration (Darney et al., 2013; Morgan, Farkas, & Wu, 2009).

Differences in teacher behavior ratings. Researchers have questioned whether poorer teacher ratings of behavior for Black students are related to teacher bias or student misbehavior (Downey & Pribesh, 2004; Pigott & Cowen, 2000; Wright, et al., 2014). Pigott and Cowen (2000) examined how child race, teacher race, and the match of the race of the teacher and child related to teacher ratings of student performance and school adjustment (i.e., acting out,

shy/anxious, learning problems) among 445 children in kindergarten through Grade 5. Forty-four White and 26 Black teachers completed the Teacher-Child Rating Scale (T-CRS; Hightower et al., 1986). Correlational and multivariate analysis of variance (MANOVA) analyses revealed that in comparison to White students, both Black and White teachers rated Black children as having more difficulties with school adjustment, fewer competencies, more stereotypically negative qualities (e.g., lazy, irresponsible) and poorer future educational expectations (Pigott & Cowen, 2000). Match of student and teacher race did not differentiate behavior ratings of Black and White children. However, a study conducted by Downey and Pribesh (2004) yielded different results.

Using the ECLS-K database, Downey and Pribesh (2004) investigated the effects of student-teacher matching and teacher race on teacher behavior ratings (i.e., externalizing problems, approaches to learning) with a sample of 12,989 kindergarten students'. In comparison to White students, Black students overall were consistently rated as having more problem behaviors. However, when teacher race was taken into account, this pattern changed; Black students were rated more positively by Black teachers than with White teachers, suggesting that the negative behavioral ratings of Black students were confined to those who were matched with White teachers. It's important to note that these differences were only significant for rating externalizing problems, but not approaches to learning. These findings are relevant to the present study because they show how teacher bias can be expressed in behavioral ratings, and that these differences in behavior ratings may also vary based on the type of problem behavior exhibited. Although the match of student and teacher race is not a variable of focus for the present study, it is important for readers to consider that a cultural mismatch in behavioral expectations could contribute to Black students being negatively evaluated by White teachers,

which could in turn lead to actions such as grade retention, special education evaluation, and/or office referrals.

Disproportionality in Grade Retention

Who is retained? Currently, a number of school districts across the nation mandate grade retention for students who do not meet benchmarks on standardized tests (Stearns et al., 2007). Warren, Hoffman, and Andrew (2014) analyzed data from the 1995 through 2010 Current Population Survey (conducted by the U.S. Census Bureau and the Bureau of Labor and Statistics) and found disparities in the use of grade retention by student's gender, race/ethnicity, grade level, and socioeconomic status. Approximately 2.4% of all students were retained from 1995 through 2010 (Warren et al., 2014). Across all grade levels, retention rates were highest for first-grade students (6.2%) followed by ninth-grade (2.4%). In regards to race/ethnicity, non-Hispanic Black (3.8%), Hispanic (2.8%) students were more likely to be retained than White students (2.0%) (Warren et al., 2014). A higher proportion of male students (2.6%) were also retained than female students (2.2%) (Warren et al., 2014). Higher retention rates were also present among students who lived in more urban areas and those with less educated parents (Warren et al., 2014).

Student ethnicity, gender, and poverty have previously been identified as powerful predictors of repeating a grade (Frey, 2005). Within the National Education Longitudinal Study (NELS: 1988-1992) sample, Moller and colleagues (2006) found very distinctive retention patterns by race and SES in regards to who repeated a grade. Students were surveyed during their eighth- (1998) tenth- (1990), and twelfth-grades (1992). The proportion of Black students who were retained (20.6%) was more than twice the proportion of White students who were retained (11.1%). Students from low SES backgrounds were also more than twice as likely to be retained

as students from high SES backgrounds (24.2% versus 9.6%). When examining race and SES together, Black students of low SES backgrounds were at greatest risk for grade retention; 23% of White low SES students were retained, whereas 29% of Black low SES students were retained, which is three times the rate of grade retention for White high SES students (9%).

The overall use of grade retention and grade retention disparities have declined since 2005 (Warren et al., 2014), However, the use of grade retention still calls for further exploration. The impact of grade retention is important to explore because previous research has demonstrated that repeating a grade can negatively impact a student's achievement and social-emotional adjustment (Jimerson et al., 1997; Raffaele Mendez et al., 2014; Stearns, et al., 2007).

Outcomes of grade retention. Educators, policymakers, and families have become concerned as to what extent grade retention is an effective intervention for low-achieving students (Frey, 2005). In the previously described study conducted by Jimerson and colleagues (1997), the authors sought to explore the short- and long-term effects of grade retention. The results showed that students who were retained in first grade exhibited significant growths in math achievement by second grade, but not in spelling or reading. However, the positive effect of grade retention on math achievement diminished by sixth grade. In second grade, students continued to have higher teacher ratings of problem behavior despite receiving the extra year to “mature”. This finding showed that grade retention was not an effective intervention for reducing problem behaviors. Additionally, in sixth grade students who were retained had significantly lower ratings of emotional health/self-esteem, whereas the low achieving socially promoted group showed higher gains in emotional adjustment. At age 16, there were no significant differences in reading or math achievement between the retained group and their low-achieving peers who were socially promoted. The results from this study suggest that students who were

retained did not receive academic benefits from retention, but their emotional adjustment may have been negatively impacted. These findings are consistent with the findings in a study conducted by Byrnes (1989) in which elementary age students reported feeling stigmatized by being retained and perceived this school practice as a punishment.

Using the NELS sample, Moller and colleagues (2006) used growth modeling to investigate the ways in which achievement trajectories of students who have experienced retention vary by race and SES. Results showed student race and SES had considerably large impacts on the academic achievement of students who were retained. When examining trajectories for typical (i.e., continuously promoted) students within SES categories, White students demonstrated greater academic growth over time than Black students. Among students who were retained, White students had higher reading and math scores than Black students. Moreover, diverging trajectories emerged when examining race and SES together. High SES was associated with an increase in achievement growth among White students who were retained, but high SES was associated with significantly lower achievement growth among Black students who were retained. The authors suggest that retention had a much more adverse effect on low SES White students than low SES Black students. The achievement gap between retained and promoted low SES White students was greater than the gap between retained and promoted low SES Black students. The use of grade retention has also been found to have different short- and long-term effects on students by gender. In a study conducted by Pagani, Tremblay, Vitaro, Boulerice, and McDuff (2001) ($n = 6,397$), they found that boys were more susceptible to experience negative long-term effects of early grade retention characterized by an increase in disruptive behavior and lower academic performance through elementary school (i.e., kindergarten through sixth grade). Girls who had been retained at an early age were also more

likely to have poorer academic achievement over time, however the negative impact on disruptive behavior was only short-term.

McCoy and Reynolds (1999) also found that students who were retained exhibit poor academic outcomes. The sample consisted of 1,164 students from the Chicago Longitudinal Study (1986-1994) who were predominantly Black and low-income. Results showed 28% of students had been retained by eighth grade, and the academic performance of those who were retained was .40 standard deviations lower than their peers who had been promoted (McCoy & Reynolds, 1999). Additionally, the negative impact of grade retention on reading achievement was found to be greater when students were retained in early elementary years (Grades 1-3) than in later grades (Grades 4-7). Interestingly, McCoy and Reynolds did not find a relationship between school discipline reports and grade retention, and those who were retained had fewer school-reported incidents of delinquency infractions than their peers who were not retained. These results are contrary to other studies that found children who were retained were significantly more likely to have school disciplinary problems than their promoted peers (Jimerson et al., 1997; Stearns et al., 2007).

A recent study conducted by Raffaele Mendez and colleagues (2014) analyzed longitudinal data (kindergarten through grade 12) from the Omnibus Project (n = 6,841) to investigate the long-term school-based outcomes for students who were either retained in kindergarten or experienced delayed entry into kindergarten (i.e., students who were eligible to begin kindergarten in the Fall 1988 but did not enroll until Fall 1989). The researchers also explored how these two groups of kindergarteners compared to each other and typically progressing students (e.g., sociodemographic characteristics, teacher ratings of behavior in kindergarten). Significant group differences emerged between the three groups of kindergarten

students. In comparison to typically progressing students, both the delayed entry and retained groups had more boys than girls (63% boys in the retained and delayed entry groups, 50% boys in the typically progressing group). Typically progressing and delayed entry groups shared similar distributions of student ethnicity and SES (79.9% and 82.1% White, 16.5% and 15.7% Black, and 27.9% and 35.8% receiving free lunch respectively). In contrast, Black students and low-income students were overrepresented in the retained group (40% White, 56% Black, 73.8% receiving free lunch).

In regard to kindergarten teacher ratings of behavior, students in the retained group were rated less favorably (i.e., paying attention, attitude toward school, perception of school success) in comparison to the other two groups (Raffaele Mendez et al., 2014). Propensity score analysis was used to examine the long-term outcomes for each of the kindergarten groups. When controlling for potential confounding variables (e.g., lunch status) the retained group of kindergarteners demonstrated the poorest long-term outcomes of the three groups with the fewest differences emerged between the delayed entry and typically progressing groups. Teachers in grades 3 and 5 rated children in the retained group less favorably in regards to attention and attitudes toward school. Students in the delayed entry and typically progressing groups obtained significantly higher achievement scores on standardized tests of reading, mathematics, and language in grades 3, 5, and 7 than students in the retained group. The authors stated that the achievement gap between the typically progressing and retained students was higher between those who paid for their lunch, suggesting lunch status by itself did not account for the poorer outcomes in the retained group of students. Of note, there were significant differences between the three groups in regard to being placed in special education; retained students were at most risk for being placed in special education, followed by delayed entry students and then typically

progressing students. In comparison to the delayed entry group, the retained group was 6.64 times more likely (paid lunch) 3.4 times more likely (free or reduced price lunch) to be placed in special education in grades 1-5. Significant differences did not emerge between the groups on office referrals in grades 6-10. The findings of this study are consistent with previous literature demonstrating that low-income, Black students are more likely to experience grade retention (Jimerson et al., 2007; Moller et al., 2006). The findings from Raffaele Mendez et al. (2014) is relevant to the present study because it demonstrated early grade retention as an intervention for struggling students did not improve student outcomes.

Grade retention is also of concern because it continues to be one of the most powerful predictors of school dropout (Jimerson, 2001; Jimerson et al., 2002; Pagani et al., 2001; Stearns et al., 2007). Stearns and colleagues (2007) used the NELS (1998-1992) data to explore the relationship between grade retention and early high school dropout (i.e., dropping out by tenth grade), and late drop out (i.e., dropping out by twelfth grade). Logistic regression analyses revealed that Black, White, and Latino students who were retained were significantly more likely to drop out of school than students who were promoted. When analyzing late drop out for Black and White students, achievement scores, educational pessimism (i.e., thoughts about dropping out of high school), and disciplinary behavior (e.g., sent to the office for misbehaving) significantly contributed to the gap in dropout probability between students who were retained and promoted (Stearns, et al., 2007). The negative outcomes associated with grade retention in the previously described empirical studies demonstrate the need for further research on outcomes for students who have been retained. The following section explores disproportionality in special education as well as outcomes associated with this school practice.

Disproportionality in Special Education

Who is in special education? The overrepresentation of ethnic minority students in special education has been a complex issue that has persisted within our educational system for decades. Researchers have conducted studies that have provided evidence that disproportionality in special education does exist and needs to be addressed. The following empirical studies examine various factors that contribute to disproportionality in special education.

Some scholars have suggested that Black students are disproportionately at risk for being subject to the negative effects of poverty, and as a result, require more intensive services across disability categories (MacMillan & Reschly, 1998). However, the research behind the association between socioeconomic status and special education disproportionality has been mixed. Skiba, and colleagues (2005) conducted a study exploring the influence of race and poverty in explaining ethnic disproportionality in special education. They used data from 295 school districts. Ordinary least squares (OLS) regression analyses revealed poverty was only a significant predictor of disproportionality for mild mental retardation. Poverty was not a significant predictor of overall levels of disproportionality in special education enrollment, nor was it a significant predictor for the emotionally disturbed or moderate mental retardation disability categories. An interesting unexpected finding was that for the speech and language and learning disability categories, there was a significant inverse relationship between poverty and disproportionality; as the proportion of students receiving free or reduced price lunch increased, disproportionality for those categories decreased. Their findings indicated that across disability categories, poverty was a weak and inconsistent predictor of disproportionality in special education. When investigating the influence of race and poverty as a predictor for special

education identification, knowledge of student race emerged as a more important predictor than knowledge of poverty status.

When considering the risk of race and poverty on special education placement, Hibel, Farkas, and Morgan (2010) found results that differed from that of Skiba and colleagues (2005). Hibel and colleagues (2010) used data from the ECLS-K to examine predictors of special education placement by fifth grade. A sample of 11,138 children and 970 schools were examined in this study. Consistent with previous research, they found that students who were Black or male were placed in special education at significantly higher rates in comparison to their White and female counterparts. However, when statistically controlling for family socioeconomic status, the odds ratio for Black students decreased and was no longer statistically significant, whereas the odds ratio for being male essentially remained the same (Hibel et al., 2010). These findings suggest that within this study, poverty played a role in the disproportionate representation of Black students in special education.

Sullivan and Bal (2013) examined the extent to which students from diverse cultural and socioeconomic backgrounds were disproportionately represented in special education and the extent to which individual risk for special education identification was predicted by individual (i.e., sociodemographics, attendance, suspension) and school-level factors (i.e., percentage of minority students, students with free or reduced price lunch, school rates of grade retentions and school suspensions). The sample consisted of 17,837 students from 39 schools. The results of this study showed that Black males were at the greatest risk for being identified as having multiple disability categories that qualified for special education services, such as having Specific Learning Disability (LD), Emotionally Disturbed (ED), or Other Health Impaired (OHI). Additionally, the researchers found that Black male students receiving free or reduced price

lunch were at highest risk for special education placement. However, the risk was not significantly different between students who were poor and Black versus poor and White. Consistent with the findings of Hibel and colleagues (2006), socioeconomic status was a significant predictor of special education status meaning that students who came from low-income backgrounds were at risk for being placed in special education. The intersection of race, gender, and socioeconomic status are important to take into consideration when examining disproportionality in special education.

Another important finding highlighted in the study conducted by Sullivan and Bal (2013) was that experiencing higher numbers of school suspension increased student risk for special education placement. Additionally, students who attended schools where there were higher rates of grade retention were less likely to be placed in special education. Sullivan and Bal (2013) suggest that perhaps some schools address students' learning and behavioral needs through grade retention and disciplinary exclusion, while others rely on placing children in special education. These findings are valuable to the present study because it portrays the need for future research on the relationships between disciplinary practices, special education identification, and grade retention.

Outcomes of special education placement. One of the primary concerns of disproportionality in special education is that access to the general education curriculum and instruction in the least restrictive environment is not equally distributed among all ethnic groups (Skiba Poloni-Staudinger, Gallini, Simmons, and Feggins-Azziz., 2006). The Brown v. Board of Education (1954) decision led to the desegregation of public schools, however, the overrepresentation of ethnic minority students in special education has served as a mechanism for resegregation within schools (Ferri & Connor, 2005). Fierros and Conroy (2002) analyzed

data from the Office for Civil Rights 1998 compliance report and found evidence for disproportionality by educational environment. The researchers found that 55% of White students with disabilities were educated in inclusive settings, defined as spending less than 21% of the school day outside of the general education classroom, whereas only 37% of Black students with disabilities were included in such environments. Additionally, only 16% of White students with disabilities were educated in substantially separate class placements; conversely, 33% of Black students with disabilities were educated in these environments.

To further explore disproportionality by educational environment, Skiba and colleagues (2006) conducted a study examining the extent to which Black students are disproportionately served in more restrictive environments in comparison to their White peers with the same disability. More specifically, they looked at how disability categories that could result in more restrictive placements (i.e., emotional disturbance) contribute to disparities in educational environments. Data for this study was obtained from the Indiana Department of Education and included ($N = 1,064,240$) students with individual records of having a disability. The researchers examined 10 disability-environment dyads, which comprised of five disability categories [learning disabled (LD), speech and language (SL), mild mental retardation (MMR), emotional disturbance (ED), moderate mental retardation (MoMR) and two potential educational classroom placements (general and separate class placement)]. The results of this study indicated significant disproportionality within 7 of 10 disability-placement dyads. In comparison to their White peers with the same disability, Black children with ED, MMR, LD, and SL were significantly more likely to be educated in separate settings, and those with ED, MMR, and LD were significantly underrepresented in being educated within an inclusive setting. The authors point out that disproportionality within the disability categories increased as each category became more

subjective. For example, Black students identified as LD were more than three times as likely as other students with LD to be educated in a restrictive environment, and Black students with SL were more than seven times as likely to be educated in separate classrooms. In this study, disability categories that would be expected to lead to more restrictive placements, including ED and MoMR, demonstrated less disproportionality. These findings fail to support the hypothesis that disproportionality in educational environments is due to Black overrepresentation in disability categories that would lead to more restrictive placement.

To investigate the effectiveness of special education services, Morgan and colleagues (2008) analyzed academic and behavioral outcomes of students receiving special education services within the ECLS-K sample. Behavioral measures included the Approaches to Learning, Externalizing Problems, and Internalizing Problems subscales on the Teacher SRS from the spring of 2002 (third grade) and 2004 (fifth grade). Propensity score matching analyses revealed receiving special education services had either a negative or statistically nonsignificant impact on children's learning and behavioral outcomes. Students who were receiving special education services in third grade demonstrated significantly lower reading skills in fifth grade in comparison to closely matched peers who were not receiving special education services. Both groups exhibited statistically equivalent gains in reading, therefore demonstrating that students who were receiving special education services were not catching up to their peers. In regard to behavior, the results indicated receiving special education services yielded positive effects on improving children's learning-related behaviors from third grade to fifth grade, however the magnitude of this effect was small. Children who were receiving special education services were rated as demonstrating significantly higher frequencies of externalizing and internalizing problem behaviors, however there were no statistical significant differences in gains from third

grade to fifth grade. The authors suggest that receiving special education services failed to decrease the frequency in which students demonstrated these problem behaviors, which is problematic because children who are identified as having these problems early on are at risk for negative long-term outcomes (Darney et al., 2013; Morgan et al., 2008; Reinke et al., 2013).

The overrepresentation of ethnic minority students in special education is of concern because these students' lack of access to the general education curriculum prevents them from catching up to their grade-level peers (Ferri & Conroy, 2005). Additionally, students who are labeled as being placed in special education are more likely to have lower academic expectations from their teachers (Ferri & Conroy, 2005); this factor is extremely important because high teacher expectations for student success have been found to be a strong predictor of improving the development of students' academic self-concept, high academic achievement, and lower incidences of suspension (Gregory, Cornell, & Fan, 2011). For students with behavioral issues, special education services as an intervention has failed to significantly improve children's behavioral outcomes (Morgan et al., 2008). Disproportionality in special education is of concern because of the link between special education and school suspensions, as ethnic minority students with disabilities continue to be overrepresented in experiencing school suspensions (Losen & Gillespie, 2012; Sullivan & Bal, 2013)

Disproportionality in School Suspension

Exclusionary discipline processes have become a common response for how school administrators address student disciplinary infractions. However, these practices are often seen as controversial because they reduce student academic engaged time; are a strong indicator that a student may drop out of school; do not seem to improve student outcomes through deterring future misconduct; and fail to address the root of the misbehavior (Achilles, McLaughlin, &

Croninger, 2007; Bowman-Perrott, Benz, Hsu, Kwok, Eisterhold, & Zhang, 2013). Additionally, it is critical for educators to consider that the students who are most likely to be experience suspension are frequently students who academically need to be in school (Christle, Jolivette, & Nelson, 2005).

Who is suspended? Losen and Gillespie (2012) used data provided by the Office for Civil Rights (OCR) to examine the racial disparities in the use of school suspensions. In the 2009-2010 academic year, the groups who were the most likely to be suspended in schools were Black, American Indian, and Latino students, with Black students being suspended at the highest rates. The breakdown of the percentage of students within a racial group who experienced at least one suspension was as follows: 17% Black, eight percent American Indian, 7% Latino, 5% White, and 2% Asian. What was particularly disturbing about these data was that students who belonged to these ethnic minority groups were even more likely to be suspended if they were also identified as having a disability. Overall, students with disabilities were about twice as likely to be suspended as their non-disabled peers; the rates for all racial groups combined were 13% for students with disabilities and 7% for those without disabilities. It was especially alarming that 25% of Black students with disabilities had experienced at least one out of school suspension, in comparison to only 9% of White students who were identified as having a disability. Despite the federal and state laws in place that are supposed to protect students from being subjected to unjust exclusion due to their disabilities (i.e., IDEA, 2004), the data shows that having a disability substantially increases a student's risk for suspension, especially if that student is also Black. The following paragraphs will review empirical studies that have sought to explore predictors of experiencing exclusionary discipline, and have demonstrated that

exclusionary disciplinary practices have been disproportionately applied to students with disabilities.

Raffaele Mendez (2003) conducted a longitudinal study exploring how student demographic characteristics (i.e., race, gender, SES) and special education classification predicted student suspension rates. Additional findings of this study are explained in the following section, Long-Term Outcomes of School Suspensions. The sample consisted of 8,268 students who were followed from kindergarten (1989) through grade 12 (2002). Within this sample, 66.27% of all Black males receiving free or reduced price lunch and special education services were suspended at least once in grade 6, whereas 44.12% of all White males receiving free or reduced price lunch and special education services received at least one suspension. However, when the free or reduced price lunch variable was removed, the numbers were substantially different: 13.60% of Black males in special education who paid for their lunch were suspended, whereas 54.29% of White males in special education who paid for their lunch were suspended. Regardless of special education status, Black girls receiving free or reduced lunch were also found to be significantly more likely to be suspended than girls in any other demographic group. These findings demonstrate the relationship between disability status, race, and class as a risk factor for experiencing a school suspension is very complex and that socioeconomic status.

Much of the research on students who are at risk for school suspensions are focused on Black males. Blake, Butler, Lewis, and Darenbourg (2010) sought to contribute to this gap in the literature by examining patterns of discipline among elementary and secondary female students ($N = 9,364$) who had received at least one discipline sanction (i.e., in-school suspension, out-of-school suspension, expulsion). This study revealed that in comparison to White, Hispanic,

and Asian female students, Black female students were overrepresented across all discipline sanctions in comparison to their same-gendered peers. There were also observed differences by reason for discipline referral. In comparison to Hispanic female students, Black female students were more likely to be cited for defiance, improper dress, using profanity toward a student, and physical aggression, and in comparison to White female students Black students were more likely to be referred for defiance, inappropriate dress, and fighting with another student. White female students were more likely to be referred for truancy in comparison to Black female students, and Hispanic students were more likely to be cited for a wider variety of reasons in comparison to Black students. The authors suggested that these findings were indicative of teachers' perceptions of behaviors such as aggression and defiance as more serious when they were demonstrated by girls than boys (Blake et al., 2011). Additionally, they suggested that teachers' concerns with inappropriate dress could be related to perceptions that their attire is "unlady like". Therefore, Black girls may have been at an increased risk in comparison to their female peers of other ethnicities because of not being perceived as engaging in socially appropriate behavior (i.e., not being feminine enough) (Blake et al., 2011).

Krezmien, Leone, and Achilles (2006) conducted another longitudinal study investigating how trends in school suspension practices in Maryland public schools changed from 1995 to 2003. More specifically, they explored how race and disability affected an individual's risk of being suspended. Using logistic regression with White students as the reference group, the researchers found that the odds ratio for and Black student to be suspended increased from 1.6 in 1995 to 2.5 in 2003, with a large increase in the odds ratio in 1998, followed by a decrease in 1999. In 2003, when combining race and disability status the odds of experiencing a school suspension were highest for students with ED across all racial groups. Black students with ED

had a risk ratio of 13.43 for experiencing a school suspension, which was the highest odds ratio comparison to all racial and disability groups. Among students with ED, Hispanic students had a risk ratio of 10.08, followed by White students with a risk ratio of 8.95, and Asian and American Indian students who had risk ratios of 6.29 and 6.14 respectively. These rates are problematic because these students require intensive and consistent behavioral interventions, and these services are being interrupted when students experience exclusionary discipline. Additionally it is possible that schools are poorly managing challenging behaviors and are not considering the student's disability when selecting disciplinary consequences.

Within the study conducted by Krezmien and colleagues (2006) the odds ratio for suspension was especially high for Black students with OHI and LD, whose odds were more than twice than that of the White, Hispanic, and Asian groups in the OHI and LD categories. American Indian students' risk ratio was higher than that of Black students only in the OHI category. A possible explanation for why students with OHI and LD are at a greater risk for being suspended than their same-race peers is that these students may be more likely to respond to challenging academic tasks by engaging in disruptive behaviors, which in turn increases their chances of receiving exclusionary discipline. However, there is no clear rationale behind the disproportionality of exclusionary discipline among Black students with OHI and LD. Disproportionality within disability groups is most prominent in the mental retardation (now referred to as intellectual disability) category, in which Black students are approximately three times the risk for being suspended in comparison to all other racial groups with the same disability. Krezmien and colleagues suggest that a possible explanation is that students who are Black with a disability experience unequal treatment from school teachers and staff and because

of the presence of other sociocultural factors (e.g., racial and cultural differences) that influence a teacher's choice to remove the child from his or her classroom.

Achilles et al. (2007) and Bowman-Perrot et al. (2013) utilized the Special Education Elementary Longitudinal Study (SEELS) to examine risk for school exclusion among students with disabilities. Participants included 1,824 students ages 7 through 14 years old that were chosen from Wave 1 of the SEELS database. Achilles et al. (2007) focused on three high-exclusion disability groups: emotional/behavioral disorders (EBD), other health impairment (OHI) with a diagnosis of attention-deficit/hyperactivity disorder (ADHD), and learning disability (LD). The authors noted that students in the EBD group were of particular concern because of their challenges with emotion regulation and behavior control. These two challenges are also common among children with ADHD, however there is limited research on students with ADHD in the disciplinary exclusion literature. Using logistic regression, the authors found that children who were identified as EBD and ADHD were more likely than children with LD to be experience disciplinary exclusion, and Black students were more likely to be suspended in comparison to White students across all disability categories. However, within the EBD group, Black ethnicity did not maintain significance when socioeconomic status and family structure were included in the models. Black ethnicity also remained significant for the ADHD and LD groups when taking the aforementioned variables into account.

Some scholars have raised the question if disproportionality in school discipline exists because Black students are more likely than White students to bring behavioral problems into the classroom (Wright et al., 2014). However, studies have found that disciplinary practices are not applied equally to Black and White students. Skiba and colleagues (2002) found that White students are more likely to be referred for infractions that are based on objective events that

result in a permanent product (e.g., vandalism, smoking, leaving without permission, obscene language), whereas Black students are more likely to be referred for more subjective infractions (e.g., disrespect, excessive noise, threat, loitering) where the level of severity depends on the judgment and perception of the person making the referral. In another study conducted by Skiba and colleagues (2011) Black and Latino students were found to be significantly more likely than their White peers to receive harsher punishments (i.e., out-of-school suspension or expulsion) for committing the same or similar behavioral infraction. These studies fail to support the notion that Black students bring more behavioral problems into the school setting; instead, they show that student race plays a role in how school personnel and administrators discipline their students.

The influence of student race on disparities in disciplinary practices was explored in two controlled experiments conducted by Okonofua and Eberhardt (2005). More specifically, the researchers tested the hypothesis that racial stereotypes can cause teachers to negatively respond to Black students' misbehavior. Participants in the first study included 57 predominantly White female teachers who taught kindergarten through grade 12. Teachers were asked to read office-referral records from a male, middle school student who misbehaved twice (one for insubordination, the other for class disturbance). Teachers in one condition were informed that the student was White, and in the other condition the student was Black. Results of ANOVA analyses revealed that when the student was Black, the teacher believed that he should be more severely punished after the second infraction than the White student should be punished. The Black student was also significantly more likely to be labeled as a troublemaker than the White student. In a second study (n = 204 teachers; 147 females, 55 males, 2 unknown), the authors found that teachers perceived the Black student's misbehavior as significantly more suggestive of a pattern of problem behaviors than the White student's misbehavior. This study makes a

significant contribution to the literature because it demonstrates that racial disproportionality in school discipline occurs despite Black and White students committing the same behavioral infractions, and that teacher responses to misbehavior can contribute to the discipline gap. Disproportionality in school discipline is especially problematic in education because exclusionary discipline has been associated with negative long-term outcomes for students (Bowman-Perrot et al., 2013; Fabelo et al., 2011; Katsiyannis, et al., 2012; Raffaele Mendez, 2003).

Long-term outcomes of school suspensions. Studies have found that experiencing school suspensions have been associated with negative long-term outcomes for students. Bowman-Perrot et al. (2013) extended the research conducted by Achilles et al. (2007) to investigate patterns and predictors of disciplinary exclusion over time for students with disabilities. In this study, the same 3 disability categories were examined: EBD, ADHD, and LD. Data had been collected in 3 waves over a 6-year period. The findings of this study indicated that across all disability categories, students who experienced school exclusion at Wave 1 were two to five times more likely to be excluded in Waves 2 and 3. Consistent with findings in Raffaele Mendez (2003), the data demonstrates that experiencing school exclusion early was a statistically significant and strong predictor for being excluded again over time. Consistent with the findings in Achilles et al. (2007), students with EBD were at greatest risk for initial disciplinary exclusion, followed by ADHD and LD. Being male or Black also increased the odds of being excluded. In both Waves 1 and 2, social adjustment was the only variable that predicted exclusion out of all of the academic and social skills variables, The social adjustment variable within the SEELS data base was constructed based on teacher ratings describing how well the students got along with peers and how well the student avoided situations that could lead to

trouble. The authors noted that there is little empirical research exploring the association between student social skills and disciplinary exclusion and that further research in this area is needed. The findings of this study demonstrate that receiving a suspension does not deter student misbehavior, instead, students who were suspended were more likely to be suspended again.

Raffaele Mendez (2003) sought to discover predictors of student suspension rates (i.e., teacher ratings of attention and behavior, previous suspensions), and how school suspension affects students' educational achievement and high school graduation. Results of this study revealed that teacher ratings of behavior in grades 3-5 and experiencing an out of school suspension in grades 4-5 significantly predicted experiencing school suspensions in grade 6. Additionally, there was a relatively strong relationship between the number of out of school suspensions in grades 6, 7, and 8. The proportion of students who experienced at least one suspension peaked in grade 10 at 20.24%, and declined to 18.66% by grade 12. Additionally, school enrollment declined from 8,673 students in ninth grade to 5,830 students in twelfth grade. Raffaele Mendez (2003) suggested that these results indicate that suspensions are not an effective way to manage student behavior. Rather, the author hypothesized that students who are suspended often times do not receive the services needed to address why they were suspended in the first place, and are thus more likely to be suspended again.

Students who are suspended are also at an increased risk for being retained in a grade and for dropping out of school. Marchbanks and colleagues (2013) analyzed longitudinal data from nearly a million students within the Texas Education Agency's Public Education Information Management System to examine student progress from seventh through twelfth grade in regards to school discipline, school dropout, and grade retention. Logistic analyses revealed that the

probability for being retained in a grade doubled when a student had received a single in-school suspension (ISS); students with no discipline record had a small probability of 0.013 of being retained, however this probability increased to 0.025 when the student had been suspended and this increase was deemed statistically significant. Additionally, the authors found that in comparison to students who had never had a discipline record, students who had received an ISS once during ninth grade were 46.2% more likely to be retained in grades 11 and 12. In regard to school dropout, students who had experienced at least one ISS or worse between Grades 7 and 12 were 23.5% more likely to withdraw or drop out of school at school. The findings of this study demonstrate the school discipline has a negative impact on increasing a student's risk for repeating a grade or dropping out of school. School exclusion is also of dire concern because of its impact on the phenomenon known as the "school to prison pipeline".

Using exclusionary discipline practices in schools has raised civil rights concerns due to evidence that ethnic minority students are overrepresented in experiencing exclusionary discipline (Gregory et al., 2010; Losen & Gillespie, 2012; Skiba et al., 2009). Additionally, students who experience academic problems, frequent suspensions, grade retention, and special education placement have been documented as contributors to criminality in adulthood (Katsiyannis, et al., 2012). Researchers and policy makers often refer to this phenomenon as the "school-to-prison pipeline", which "represents the ways in which the failures of school systems to educate our children contribute to the increase in the juvenile justice and adult prison population" (Tulman & Weck, 2009, p. 876-877). Groups who are at most risk for becoming a part of the school-to-prison pipeline include students with disabilities and students who are ethnic minorities (Tulman & Weck, 2009). Students who are identified as having behavioral problems at a young age are also at an increased risk for being arrested (Darney et al., 2013).

Townsend (2012) recently conducted a qualitative study with Black adjudicated males (ages 14-17) who had dropped out of school. These students expressed sentiments of having very negative school experiences, including experiencing multiple school suspensions, feeling unliked or unwanted by their teachers and administrators, and being repeatedly blamed for infractions they did not commit. These findings shed light on the school experiences of youth who have been subjected to the school to prison pipeline.

Recent studies have shown that disproportionality in out of school suspensions has been a powerful predictor for comparable levels of racial disparity in juvenile court referrals. These results are evident even when controlling for levels of delinquent behaviors, poverty, and other demographic variables (Skiba et al., 2012). A recent study conducted by the Council for State Governments Justice Center found that within a sample of nearly one million students in Texas, experiencing school suspensions not only increased the probability of repeating a grade, but also in making contact with the juvenile justice system or dropping out of school (Fabelo, et al., 2011). Students who were expelled, especially Black students, were often sent to alternative education settings and juvenile detention centers. The findings of this study demonstrate the need for school administrators and personnel to work to reduce school suspensions to dismantle the school to prison pipeline and ultimately improve outcomes for youth.

Summary and Aims of the Current Study

In sum, disproportionality in education has been a problem within education for decades. Racial ethnic minority students and students with disabilities have a long-standing history of being denied access to high quality education within this country (Noltemeyer et al., 2012). Disproportionality has been perpetuated by many historical events (e.g., Jim Crow Laws, intelligence testing) that have had a strong impact on the structure of the education system. Over

the years, several laws and policies have been established to promote equity in education (e.g., IDEA, 2004), however despite federal efforts to improve outcomes for students, racial gaps in achievement and school discipline continue to persist today (NCES, 2013; Noltemeyer et al., 2012; Skiba, et al., 2012).

Wright and colleagues (2014) suggest that disciplinary disproportionality between Black and White students is accounted by prior problem behavior, suggesting that Black students bring more behavioral problems into the classroom that prompt a discipline referral by school personnel. However, the authors did not consider that a level of subjectivity is present in teacher ratings of problem behavior, and that these subjective perceptions of problem behaviors could lead to Black students being more likely to be referred for special education or retained in a grade (Jimerson et al., 1997; MacMillan et al., 1996; Shaywitz et al., 1990). Several studies have documented that students who are Black, male, or low SES are not only more likely to be suspended, but are also more likely to be placed in special education or repeat a grade (Meisels & Liaw, 1993; Moller et al., 2006; Skiba et al., 2005; Skiba et al., 206; Stearns et al., 2007; Sullivan & Bal, 2013). Because students who are in special education or who have repeated a grade are at risk for being suspended in school (Marchbanks et al., 2013; Stearns et al., 2007; Sullivan & Bal, 2013), the current researcher seeks to determine if the relationship between early problem behaviors and school suspensions is explained by these two school practices.

The aim of this study is to examine relationships among early teacher concerns regarding behavior, grade retention, special education, and experiencing a school suspension. The relationships among these variables within a longitudinal database have not been explored in the literature. As such, more research is needed on how grade retention and special education are used among youth for whom teachers report behavioral concerns in elementary school, and how

those school practices impact discipline outcomes for youth over time. A major focus of the study is to determine whether decisions made on behalf of children with early teacher-rated behavioral concerns differ based on child gender, race, and SES.

Chapter III: Method

This chapter describes the purpose of the study, source of the data, major variables, participants, procedure, and data analysis.

Purpose of the Study

This study explored the long-term outcomes of youth who were perceived by teachers as having behavioral problems in early elementary school (i.e., kindergarten and first grade). More specifically, the study examined the extent to which teacher-reported problems with classroom behavior in early elementary school predicted three school outcomes: receiving special education services in fifth grade, experiencing at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade. Because students who are Black, male, or low-income are more likely to experience poorer school outcomes in comparison to their peers (Gregory et al., 2010; Moller et al., 2006; NCES, 2013), this study explored how race (i.e., Black and White students), gender, and poverty status (i.e., student's family is at or above the poverty line or below the poverty line) moderated the relationship between teacher behavior ratings and the three aforementioned school outcomes. This study was conducted using a structural inequity theory lens because it explored how the structure of the education system has led to differences in treatment for students of different demographic groups. The findings of this study helped elucidate outcomes for youth over time who are perceived as exhibiting behavioral problems at a young age in school. Additionally, this study examined how strongly special education placement, grade retention, and school discipline outcomes were related to each other. Investigating these relationships was especially important because these practices are often used

with the goal of improving school outcomes for struggling students despite the literature showing that outcomes for these students are often still poor (Jimerson et al., 1997; Morgan et al., 2008; Sullivan & Bal, 2013).

In order to fulfill these research objectives, the current study examined the following research questions:

1. Controlling for race, gender, and poverty status, to what extent do teacher-reported early problems with classroom behavior predict:
 - a. Special education status in fifth grade?
 - b. Experiencing at least one grade retention by fifth grade?
 - c. Receiving at least one school suspension (including in- and out-of school suspension) by eighth grade?
2. To what extent do student demographics (i.e., race, gender, and poverty status separately) moderate the aforementioned relationships?
3. To what extent do special education status in fifth grade, experiencing at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade relate to each other?

Source of the Data

The public version of the Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K) database was used to address the research questions in this study. This database comes from the Institute of Education Sciences (IES). Using this database for the current study was advantageous because it is a national database that allows researchers to study children's early school experiences from kindergarten and through eighth grade. The ECLS-K collected data over seven waves: the fall and the spring kindergarten (1998-99), the fall and

spring of first grade (1999-2000), the spring of third grade (2002), the spring of fifth grade (2004), and the spring of eighth grade (2007). Because the data is publicly available via the internet and does not include identifying information, the research is not considered to involve human subjects and is not under the purview of the of the Institutional Review Board (IRB) at the University of South Florida (USF).

The ECLS-K database consists of a nationally representative sample of children, parents, teachers, and schools from across the United States. The ECLS-K sampled over 21,000 students across the nation. ECLS-K User's Manual (Torangeau, Nord, Le, & Sorongon, 2009) states that a multistage, stratified, clustered design was utilized to select the ECLS-K sample, meaning that cases were clustered within primary sampling units (PSUs). During the first stage of sampling, the United States was divided into PSUs (i.e., counties), which were then stratified based on characteristics such as region and household income. During the second stage of sampling, public and private schools with kindergarten programs were chosen within sampled PSUs, and, in the third-stage, the sampling units consisted of kindergarten children within each sampled school. As a result of clustering, the sampled children lived in closer geographical vicinity to each other, and they were more likely to be enrolled in the same school. Children who attended the same school or who lived near each other were more likely to share similar characteristics than children who lived farther apart or attended different schools. Therefore, the variation in this sample was lower than it would have been had the sample been chosen through a simple random sample.

To adjust for strata and clustering, the Taylor Series Linearization method was used to calculate standard errors (SE). Additionally, the ECLS-K weights were used to adjust for disproportionate sampling to make the data more representative of the target population.

Additionally, applying weights is important to account for differential patterns of response/nonresponse (i.e., missing data) and differential selection probabilities (i.e., oversampling certain groups of children) (Torangeau et al., 2009). Researchers utilizing the ECLS-K database must base their decision on which weights to use based on the level of analysis (i.e., child, teacher, school), the round of data collection, and the components providing the data in the analysis. The longitudinal weight used in the present study was selected based on recommendations from statisticians from the Institute of Education Science (IES), and this weight was used across all levels of analyses. Of note, using the Taylor Series Linearization method and applying weights to the analyses removed cases from the analyses, therefore reducing the current sample size to 5,627 (see Participants).

The ECLS-K database was selected to investigate the research questions for this study because using a national database with a large sample sizes allowed for greater external validity; it is expected that the findings from this study were generalizable to the population. This study also makes a contribution to the literature on special education, grade retention, and school suspensions through the use of longitudinal data to explore outcomes for youth over time.

Participants

The children and families in the ECLS-K database come from diverse geographic, socioeconomic, and racial/ethnic backgrounds. The database also consists of public and private schools, as well as students who participate in general education and special education classrooms. The participants in the current study included students from the ECLS-K database with data from kindergarten through eighth grade. Just over 8,700 children participated in all five rounds of ECLS-K data collection in kindergarten, first, third, fifth, and eighth grade. Due to the large educational disparities between White and Black students that have been documented in the

literature (Gregory et al., 2010; Losen & Gillespie, 2012; Skiba et al., 2005; Skiba et al., 2006; Sullivan & Bal, 2013), the children included in this study sample only consisted of White or Black children. Participants' descriptive data are described in Table 1. Poverty status was missing for 1.31% of cases. No missing data were reported for child's gender or race.

Table 1

Demographic Characteristics as a Percentage of the Eighth Grade Sample

| Variable | n | Total Sample (n = 5,627) | |
|-------------------------------|-------|--------------------------|------|
| | | % | SE |
| Race | | | |
| Black | 765 | 22.88 | 2.04 |
| White | 4,862 | 77.12 | 2.04 |
| Gender | | | |
| Male | 2,825 | 52.56 | 1.49 |
| Female | 2,802 | 47.44 | 1.49 |
| Poverty Status | | | |
| Below Poverty Threshold | 629 | 16.06 | 1.60 |
| At or Above Poverty Threshold | 4,963 | 83.94 | 1.60 |

Data Collection Procedures

In order to collect data from parents, the ECLS-K research team had trained interviewers conduct a 40-50 minute computer-assisted telephone interview. This method was used to record the parent's answers. In-person interviews were conducted when the child's family did not have a telephone. To obtain data from teachers, teachers completed paper and pencil surveys. The ECLS-K researchers developed materials and procedures to maximize the inclusion of children and families whose primary language was not English (e.g., translators), and children with special needs (e.g., designing questionnaires to collect information regarding the child's Individualized Education Plan and receipt of services).

Attrition

As with any longitudinal dataset, the sample size in the ECLS-K decreased with each round of data collection due to attrition (i.e., nonresponse, change in eligibility status). In fifth-grade (2004-2005), four groups of children were excluded from the study for the following reasons: (1) children became ineligible in a previous round of data collection (i.e., moving out of the country, death), (2) children moved out of the schools and could not be followed to their new schools, (3), parents of children refused to cooperate (i.e., hard refusals) with data collection rounds following spring-kindergarten, and (4) there were no first-grade nor-third-grade data available. As a result of these procedures, 5,214 children were excluded from the study sample of 21,357 children who were eligible after base year.

A standard coding scheme was applied for missing values in the ECLS-K database for all variables: “Not Applicable”, including legitimate skips (-1), “Refused” (-7), “Don’t Know” (-8), “Not Ascertained” (-9), and “System Missing” (blank). The “Not Applicable” code (-1) was applied when the respondent did not answer the question due to skip instructions or other external reasons (e.g., special education teacher did not complete student questionnaire if the student receives gifted/talented services through the IEP). The “Refused Code” (-7) was utilized when the responded explicitly indicated an unwillingness to answer the question. This code rarely appears within the data. The “Don’t Know” code (-8) was used when the respondent indicated he or she did not know the answer to the question, and “Not Ascertained” code (-9) was applied when the respondent left a question blank that should have been answered. Originally multiple imputation (MI) was going to be used to impute values for missing data. The current researcher incurred complications with this procedure using a national database, therefore listwise deletion was used in which students with missing data were excluded from analyses. Of

the sample of 5,627 students, little to no missing data were reported for most of the variables and 11.40% were missing data on school suspension.

Major Variables

The predictor variables in the present study included early elementary school teacher-ratings of behavior problems, race, gender, and poverty status. Outcome variables of interest in this study included special education placement in fifth grade, grade retention by fifth grade, and the presence of at least one school suspension by eighth grade.

Teacher ratings of classroom behavior. Teachers rated individual students' social development through completion of the Social Rating Scale (Teacher-SRS). In the current study data from teachers in kindergarten and first grade were used. Teachers self-completed the rating scales between September and December during the fall rounds of data collection, and between March and June during the spring rounds. The SRS was adapted with permission from the Social Skills Rating Scale (SSRS; Gresham & Elliot, 1990). The following two scales from the kindergarten and first-grade Teacher-SRS were included in this study: Approaches to Learning Scale (six items measuring organization, attentiveness, eagerness to learn, learning independence, task persistence, flexibility), and Externalizing Problem Behaviors Scale (five items measuring the frequency with which a child argues, fights, gets angry, acts impulsively, and disturbs ongoing activities in the classroom).

All items on the Teacher-SRS were rated on a four-point scale of one (Never) to four (Very Often). The scale scores for the Teacher-SRS were represented by an average rating of all items on the scale. Scale scores were only calculated if the teacher rated the student on at least two-thirds of the scale. The Approaches to Learning Scale measures positive aspects of child's development, and the Externalizing Problem Behaviors Scale measures problem behaviors.

Because the current study investigated teacher ratings of *problem* behavior, the Approaches to Learning Scale scores were reverse scored to reflect that higher scores were indicative of higher ratings of problem behaviors (i.e., students demonstrated higher frequencies of being *less* organized, *less* attentive, *less* eager to learn, etc.). These scores were reversed for this study because the current investigation explored behavior risk factors (i.e., demonstrating more undesirable behaviors) rather than protective factors (i.e., demonstrating more desirable, behaviors). To reflect these ratings of problem behavior, the reversed scores of the Approaches to Learning Scale were referred to in this study as “weak approaches to learning”.

The current researcher created two composite variables representing classroom behavior problems: weak approaches to learning composite and the externalizing behavior problems composite. Scores from fall of kindergarten (Time 1), spring of kindergarten (Time 2), and spring of first grade (Time 4) were averaged on each scale to create the composites. Teachers were not administered the SRS in fall of first grade. If a student was missing data on one or two time points, the average of the available scores was used to retain as many students in the sample as possible. The same survey items were administered to teachers across all three time points. Overall 95.33% of participants in this study were rated by the same teacher during Time 1 and Time 2 in kindergarten. Correlations across all three time points for weak approaches to learning can be found in Table 2, and correlations for externalizing behavior problems can be found in Table 3. Correlational analyses revealed that the relationship between these two classroom behavior problem composites was strong and positive ($r = .57, p < .001$).

Table 2

Correlations of Weak Approaches to Learning at Time 1, Time 2, and Time 4

| | Weak Approaches to Learning (Time 1: Fall Kindergarten) | Weak Approaches to Learning (Time 2: Spring Kindergarten) | Weak Approaches to Learning (Time 4: Spring First Grade) |
|---|---|---|--|
| Weak Approaches to Learning (Time 1: Fall Kindergarten) | 1.00 | | |
| Weak Approaches to learning (Time 2: Spring Kindergarten) | .64** | 1.00 | |
| Weak Approaches to Learning (Time 4: Spring First Grade) | .41** | .46** | 1.00 |

** = $p < .0001$

Table 3

Correlations of Externalizing Behavior Problems at Time 1, Time 2, and Time 4

| | Externalizing Behavior Problems (Time 1: Fall Kindergarten) | Externalizing Behavior Problems (Time 2: Spring Kindergarten) | Externalizing Behavior Problems (Time 4: Spring First Grade) |
|---|---|---|--|
| Externalizing Behavior Problems (Time 1: Fall Kindergarten) | 1.00 | | |
| Externalizing Behavior Problems (Time 2: Spring Kindergarten) | .71** | 1.00 | |
| Externalizing Behavior Problems (Time 4: Spring First Grade) | .53** | .56** | 1.00 |

** = $p < .0001$

Specific items on the SRS are not available due to copyright restrictions; therefore this researcher could not calculate reliability statistics within each scale. Reliability statistics for each of the SRS scales are found in the ECLS-K first grade manual (Tourangeau, Nord, Le, Wan,

Bose, & West, 2002). As seen in Table 4, the reliability for the Teacher-SRS was high. Previous studies have also found the SSRS (Gresham & Elliot, 1990) to be a valid and reliable metric (Demaray, Ruffalo, Carlson, Busse, Olson, McManus, & Leventhai, 1995).

Table 4.

Split Half Reliability for the Teacher Social Rating Scale Scores

| Category | Fall-kindergarten | Spring-kindergarten | Spring-first grade |
|---------------------------------|-------------------|---------------------|--------------------|
| Approaches to Learning | .89 | .89 | .89 |
| Externalizing Problem Behaviors | .90 | .90 | .86 |

Note: Split half reliability coefficients were obtained from the User's Manual for the ECLS-K First Grade Public Use Data Files. Data obtained from the kindergarten and first grade sample. (Tourangeau, Nord, Le, Wan, Bose, & West, 2002)

Demographic variables. In the present study, demographic variables (i.e., race, gender, poverty status) were considered to be moderating variables between teacher ratings of classroom problem behaviors and school outcomes (i.e., special education placement, grade retention, suspensions). The ECLS-K researchers created composite variables to represent these demographic variables. The ECLS-K manual described these variables as “composites” because they consisted of two or more variables from multiple sources across multiple data collection waves (e.g., child assessment, parent interview, teacher questionnaire, Field Management System (FMS)). The FMS used data from school records. The composite demographic variables analyzed within this study are listed below:

1. **Gender: (GENDER).** The gender composite variable was created based on the child's gender indicated in the parent interview. If parent interview data was missing on this variable, the FMS was used. Also, if the reported gender was inconsistent between the fall and spring kindergarten parent interview, the gender indicated in the FMS was used. In this study, male participants were coded as 1 and female participants were coded as 0.

2. **Race/Ethnicity: (RACE).** The race composite variable was obtained from parent interviews. FMS data were only used if parent interview data were missing. In this study, Black participants were coded as 1 and White participants were coded as 0.
3. **Family Poverty Status (WKPOVRTY, WIPOVRTY).** Household income was used to create a household-level poverty variable. For kindergarten poverty status (WKPOVRTY), income was compared to preliminary Census poverty thresholds for 1998. For first-grade poverty status (WIPOVRTY), income was compared to preliminary census poverty thresholds for 1999. These thresholds vary by household size. Households whose income fell below the appropriate threshold were classified as poor. First grade poverty status was used for analyses in this study. If first grade data were missing, poverty status in kindergarten was used instead. In this study, participants whose families are below the poverty level were coded as 1 and participants whose families are at or above the poverty level were coded as 0.

School responses to students with perceived behavioral difficulties. School response variables in this study included whether the child was identified as receiving special education services in fifth grade, whether the child experienced one or more grade retentions in elementary school, and whether or not the child has received at least one school suspension from school entry through eighth grade. These three variables were analyzed because these three school actions are often subjected to students who are perceived as being behaviorally at-risk.

Special education status was measured using the special education services composite variable (F6SPECS). The composite variable F6SPECS indicates whether or not the child received special education services in the spring of fifth grade, based on the presence or absence

of a link to a special education teacher in the FMS. In this study participants who received special education services were coded as yes (1) and participants who did not receive special education services were coded as no (0). The grade-level composite variable (T6GLVL) was used to measure the grade level of the child when they should be in fifth grade. This composite variable was created using the special education teacher part B questionnaire and information from the FMS. Teacher reports of the child's grade-level were prioritized over the FMS. The current researcher used the grade-level composite variable to create a new grade retention variable in this study (ret_T6GLVL). If the child was in fourth grade or below, the child was coded as yes (1) for retained, and if the child was in fifth grade or above the child was coded as no (0) for being retained.

During the eighth grade parent interview, parents were asked to report if their child had ever received an in- or out-of school suspension and how many times their child had been suspended. When reporting multiple suspensions, the ECLS-K uses a "hard range check" of "0-5 times", meaning if a parent's response was outside of that range it was not accepted. If the parent insisted the response outside of the hard range was correct, the interviewer would enter the information in a comments data file, where it was reviewed by other project staff. The response was accepted and entered into the data file if the comments supported the response. Due to an expected non-normal distribution of the data of students being suspended (i.e., a large number of students not being suspended), school suspensions were treated as a dichotomous outcome variable (1 = yes, 0 = no). The distribution of the school suspension data were analyzed to determine if suspensions can be treated categorical variable (i.e., child received zero, one, or more than one suspension) or as a continuous variable.

Overview of Analyses

Measures of central tendency (e.g., means, standard errors) were calculated for teacher-ratings of early problem behaviors. Additional descriptive data on the percentage of students who received special education services, at least one grade retention, and at least one school suspension were reported.

Preliminary analyses. Frequencies for categorical outcome variables of interest (i.e., special education, grade retention, school suspension) were calculated. Pearson product-moment correlations were conducted between each of the three demographic groups (i.e., race, gender, poverty status) and both behavior problem variables (i.e., weak approaches to learning, externalizing behavior problems) to measure the strength of the associations between those variables.

Logistic regression analyses. For the first research question, logistic regression analyses were used to examine the extent to which teacher-reported problems with classroom behavior predict receiving special education services in fifth grade, experiencing one or more grade retentions by fifth grade, and receiving at least one school suspension by eighth grade. Weak approaches to learning and externalizing behavior problems were analyzed within separate logistic regression models because they are conceptually different from each other. Weak approaches to learning focuses on behaviors that are more specifically related to behaviors that facilitate learning, whereas externalizing behavior problems focuses on behaviors that often stand out to be more problematic to educators and can potentially lead to a discipline referral. The current researcher wanted to understand these two classroom behavior variables' individual effects without controlling for the effects of the other variable. Results of logistic regression analyses were described as odds ratios (OR), which refer to the probability of success (e.g., being

placed in special education) divided by the probability failure (e.g., not being placed in special education). Odds ratios greater than 1 refer to being *more* likely to experience the given outcome, and odds ratios less than 1 refer to being *less* likely to experience the given outcome. For the second research question, the moderating effects of student demographics were examined by looking at the interactions between teacher-reported problem behavior and student demographics (e.g., interaction between weak approaches to learning and race) predicting each of the three school outcome variables. An alpha level of .05 was used to determine statistical significance.

Additionally, special education status in kindergarten was controlled because previous research has found that students who were identified as having a low-incidence disability (e.g., hearing impairment, autism) were more likely to be identified at school (Sullivan & Bal, 2013). This could be potentially because some characteristics of low-incidence disabilities are medical and physical in nature, and these characteristics are typically apparent at a young age. Students who were identified at some point during elementary school are more likely to have a high-incidence disability (e.g., Specific Learning Disability). A potential reason for this could be because there are more subjective factors that contribute to referrals leading to an evaluation or because a child's cumulative academic and behavioral difficulties in school places them at risk (Sullivan & Bal, 2013).

Correlational analyses. Pearson product-moment correlations were conducted between the three categorical outcome variables of interest (i.e., special education, grade retention, school suspension) to measure the strength of the relationships between those variables. An alpha level of .05 was used to determine statistical significance.

Analysis of missing data. Overall, there were low rates of missing data across the variables included in the analyses. For demographic variables, there were no missing data

reported for child's gender or race, and only 1.31% of data were missing for child's poverty status. For teacher behavior ratings (i.e., weak approaches to learning and externalizing behavior problems) only 0.13% of the data were missing for each variable. For school outcomes, there were no reported missing data for special education or grade retention status, however 11.40% of the sample were missing data for the school suspension variable. This variable most likely had the highest rate of missing data in comparison to the other variables included in this study because the data on school suspensions were collected during the last time point in the study, spring of eighth grade. Therefore the higher rate of missing data for the school suspension variable is most likely due to attrition.

To analyze patterns of missing data for the school suspension variable, a series of chi-square tests and logistic regression analyses were conducted to determine if certain students were more likely to have missing suspension data. A new variable was created to measure if the participant had missing suspension data (1 = missing suspension data, 0 = no suspension data missing). The results of the chi-square tests revealed there was a significant difference in the proportion of Black students $\chi^2(1, N = 5,627) = 81.11, p < .001$ and students who had experienced at least one grade retention $\chi^2(1, N = 5,627) = 57.83, p < .001$ who were missing suspension data. These results suggest that students who were Black or had experienced at least one grade retention were more likely to have data missing for school suspension. Logistic regression analyses were also conducted to determine if students who had higher ratings of problem behavior were more likely have missing suspension data. The results indicated that students with higher ratings of weak approaches to learning were significantly less likely to have missing suspension data (odds ratio = 0.73, $p = .01$).

Chapter IV: Results

This chapter describes the results from a series of statistical analyses that were used to answer the three research questions in present study. The first research question addressed the extent to which teacher-reported problems with classroom behavior in early elementary school (i.e., weak approaches to learning, externalizing behavior problems) predicted school outcomes at the end of elementary school and middle school (i.e., special education placement, grade retention, school suspension). The second research question addressed to what extent student demographics moderate the relationships between teacher-reported early problem behaviors and the aforementioned three school outcomes variables. Finally, the third research question addressed to what extent special education placement by fifth grade, grade retention by fifth grade, and receiving at least one school suspension by eighth grade relate to each other.

Preliminary Analyses

Descriptive Analyses. Frequencies for categorical outcome variables of interest (i.e., special education, grade retention, school suspension) are presented in Table 5. The largest proportion of students to experience any school outcome was the experience of at least one school suspension by eighth grade (17.82%). Frequencies for these three outcome variables of interest were also calculated by student demographic group and are found in Table 6. In comparison to their peers, there were higher proportions of students who were Black, male, or below the poverty threshold who experienced each of the three school outcomes.

Descriptive statistics (i.e., mean, standard error) for the continuous predictor variables of interest (i.e., weak approaches to learning, externalizing behavior problems) are presented in

Table 7. Standard errors for both weak approaches to learning ($SE = 0.16$) and externalizing behavior problems ($SE = .02$) were low, suggesting that the variable means were more likely to accurately reflect the population mean.

Table 5

Descriptive Statistics for School Outcomes

| Variable | Total Sample ($n = 5,627$) | | |
|---|------------------------------|-------|------|
| | n | % | SE |
| Special Education (in 5 th Grade) | | | |
| Yes | 491 | 10.47 | 0.86 |
| No | 5136 | 89.53 | 0.86 |
| Grade Retention (by 5 th Grade) | | | |
| Yes | 439 | 12.50 | 1.26 |
| No | 5188 | 87.50 | 1.26 |
| School Suspension (by 8 th Grade) | | | |
| Yes | 632 | 17.82 | 1.20 |
| No | 4477 | 82.18 | 1.20 |

Table 6

Descriptive Statistics for School Outcomes by Demographic Group ($n = 5,627$)

| | n | Special Education % (SE) | Grade Retention % (SE) | School Suspension % (SE) |
|----------------------------------|-------|---------------------------------|-------------------------------|---------------------------------|
| Black | 765 | 12.19 (1.85) | 21.58 (3.69) | 32.57 (2.58) |
| White | 4,862 | 9.96 (0.99) | 9.81 (1.00) | 13.89 (1.20) |
| Male | 2,825 | 13.44 (1.35) | 15.39 (1.46) | 25.63 (1.86) |
| Female | 2,802 | 7.18 (1.02) | 9.30 (2.10) | 9.32 (0.96) |
| Below Poverty Threshold | 629 | 18.78 (2.89) | 28.81 (3.85) | 22.53 (3.54) |
| At or Above Poverty Threshold | 4,963 | 8.65 (0.86) | 9.19 (0.94) | 16.67 (1.34) |

Table 7

Descriptive Statistics for Teacher Behavior Ratings

| Variable | Min. | Total Sample ($n = 5,627$) | | |
|---|------|------------------------------|------|------|
| | | Max. | M | SE |
| Weak Approaches to Learning Composite | 1.00 | 3.92 | 1.96 | 0.16 |
| Externalizing Behavior Problems Composite | 1.00 | 4.00 | 1.66 | 0.02 |

Means and standard errors for the learning behavior and externalizing behavior problem variables were calculated for each student demographic group (i.e., race, gender, poverty status) (see Table 8). Overall, students who were Black, male, or came from families below the poverty threshold had higher teacher ratings of problem behavior in comparison to their respective peers.

Table 8

Mean Teacher Problem Behavior Ratings by Student Demographic Group

| | n | Weak Approaches to Learning $M (SE)$ | Externalizing Behavior Problems $M (SE)$ |
|-------------------------------|-------|---|---|
| Black | 765 | 2.16 (0.03) | 1.84 (0.03) |
| White | 4,862 | 1.90 (0.02) | 1.61 (0.02) |
| Male | 2,825 | 2.10 (0.02) | 1.80 (0.02) |
| Female | 2,802 | 1.80 (0.02) | 1.51 (0.02) |
| Below Poverty Threshold | 629 | 2.21 (0.04) | 1.77 (0.04) |
| At or Above Poverty Threshold | 4,963 | 1.90 (0.02) | 1.64 (0.02) |

Correlational analyses. Pearson product-moment correlations were conducted between each of the three demographic groups and both behavior problem variables to measure the strength of the associations between these variables (see Table 9). All three demographic groups had small, positive, significant correlations with each of the two behavior problems variables ($r = .09$ to $r = .26$). The strongest bivariate relationships were among gender and weak approaches

to learning ($r = .26, p < .001$) and gender and externalizing behavior problems ($r = .26, p < .001$), suggesting that male students were more likely to be rated by teachers as having higher behavior problems. Poverty status and externalizing behavior problems demonstrated the weakest bivariate relationship ($r = .09, p < .001$) followed by race and externalizing behavior problems ($r = .18, p < .001$).

Table 9

Correlations Between Teacher Behavior Ratings and Student Demographics (N = 5,615)

| | Weak Approaches to Learning | Externalizing Behavior Problems |
|-------------------------------------|-----------------------------|---------------------------------|
| | <i>r</i> | <i>r</i> |
| Race (0 = White, 1 = Black) | .19** | .18** |
| Gender (0 = Female, 1 = Male) | .26** | .26** |
| Poverty Status (0 = No, 1 = Yes) | .19** | .09** |

* $p < .05$, ** $p < .01$

Logistic Regression Analyses

A series of logistic regression analyses were conducted to determine the extent to which teacher-reported problems with classroom behavior in early elementary school (i.e., weak approaches to learning, externalizing behavior problems) predicted the three school outcome variables of interest (i.e., special education, grade retention, and school suspension) and the extent to which student demographics moderated those relationships. Results for logistic regression analyses are presented in tables 10 and 11 for predicting special education status in fifth grade, tables 12 and 13 for receiving at least one grade retention by fifth grade, and tables 14 and 15 for receiving at least one school suspension by eighth grade.

The first set of logistic regression analyses (Model 1) only included student demographics and special education status in kindergarten. The second set of logistic regression analyses (Model 2) included one of the two teacher behavior ratings variables. Weak approaches to learning and externalizing behavior problems were analyzed in separate models because they are conceptually different variables and the current researcher wanted to understand their individual effects without controlling for the other variable. Student demographic variables and special education status in kindergarten were controlled for in Models 2 through 5 because it was expected that these variables would influence the outcomes. Models 3 through 5 examined the extent to which student demographics (i.e., race, gender, poverty status) moderate the relationship between teacher behavior ratings and each of the school outcome variables.

Special education. In Model 1, gender and poverty status were significant predictors of receiving special education services in fifth grade (see Tables 10 and 11). When controlling for race and poverty status, students who were male produced an odds ratio of 1.89, meaning that they were nearly twice as likely to receive special education services in fifth grade in comparison to female students ($p = .003$). When controlling for race and gender, students whose families were below the poverty line were 2.43 times more likely to receive special education services in fifth grade in comparison to students whose families were at or above the poverty line ($p = .002$). When controlling for gender and poverty status, race was not a significant predictor of receiving special education services by fifth grade; the probability of Black students being placed in special education was slightly less than that of White students ($OR = 0.95, p = .846$). Model 2 demonstrates that when controlling for student demographic variables and special education status and kindergarten, externalizing behavior problems significantly predicted receiving special education services by fifth grade with an odds ratio of 1.51 ($p = .004$) (see Table 11). This

means that for every one-unit increase in externalizing behavior problems, there was an expected 51% increase in the odds of being placed in special education by fifth grade. Weak approaches to learning produced an even greater odds ratio of 5.41 ($p < .001$), indicating that for every one unit increase in weak approaches to learning had a 441% increase in odds of being placed in special education (see Table 10). In Models 3, 4, and 5, there were no significant interactions between teacher behavior ratings in classroom behavior and student demographic variables (see Tables 10 and 11).

Table 10

Summary of Logistic Regression for Weak Approaches to Learning Predicting Special Education Status

| Variable | Model 1: Student Demographics | | | Model 2: Weak Approaches to Learning | | | Model 3: Weak Approaches to Learning x Race | | | Model 4: Weak Approaches to Learning x Gender | | | Model 5: Weak Approaches to Learning x Poverty | | |
|--|-------------------------------|-----------|----------|--------------------------------------|-----------|----------|---|-----------|----------|---|-----------|----------|--|-----------|----------|
| | <i>n</i> = 5,576 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | |
| | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 0.95 (0.27) | -0.05 | .846 | 0.72 (0.26) | -0.32 | .218 | 0.22 (1.38) | -1.50 | .280 | 0.73 (0.26) | -0.32 | .219 | 0.72 (0.26) | -0.32 | .216 |
| Gender (0 = Female, 1 = Male) | 1.80** (0.20) | 0.59 | .003 | 1.10 (0.20) | 0.09 | .641 | 1.10 (0.20) | 0.10 | .619 | 1.00 (0.83) | .003 | .997 | 1.10 (0.20) | 0.10 | .628 |
| Poverty Status (0 = No, 1 = Yes) | 2.43** (0.28) | 0.89 | .002 | 1.74 (0.55) | 0.55 | .061 | 1.75 (0.30) | 0.56 | .062 | 1.74 (0.29) | 0.55 | .060 | 2.76 (1.05) | 1.02 | .334 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 8.23** (0.31) | 2.11 | <.001 | 7.10** (1.96) | 1.96 | <.001 | 7.05** (0.40) | 1.95 | <.001 | 7.11** (0.40) | 1.96 | <.001 | 7.08** (0.40) | 1.96 | <.001 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Weak Approaches to Learning | - | - | - | 5.41** (0.16) | 1.69 | <.001 | 4.93** (0.19) | 1.59 | <.001 | 5.27** (0.30) | 1.66 | <.001 | 5.63** (0.19) | 1.73 | <.001 |
| Interactions | | | | | | | | | | | | | | | |
| Weak Approaches to Learning x Race | - | - | - | - | - | - | 1.59 (0.53) | 0.47 | .383 | - | - | - | - | - | - |
| Weak Approaches to Learning x Gender | - | - | - | - | - | - | - | - | - | 1.04 (0.35) | 0.04 | .912 | - | - | - |
| Weak Approaches to Learning x Poverty | - | - | - | - | - | - | - | - | - | - | - | - | 0.83 (0.41) | -0.19 | .650 |

Note. Odds ratios greater than one reflect a greater likelihood of receiving special education services in fifth grade, whereas odds ratio values less than one indicate being less likely to receive special education services in fifth grade.

p* < .05, *p* < .01

Table 11

Summary of Logistic Regression for Externalizing Behavior Problems Predicting Special Education Status

| Variable | Model 1: Student Demographics | | | Model 2: Externalizing Behavior Problems | | | Model 3: Race x Externalizing Behavior Problems | | | Model 4: Gender x Externalizing Behavior Problems | | | Model 5: Poverty Status x Externalizing Behavior Problems | | |
|---|-------------------------------|-----------|----------|--|-----------|----------|---|-----------|----------|---|-----------|----------|---|-----------|----------|
| | <i>n</i> = 5,576 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | |
| | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 0.95 (0.27) | -0.05 | .846 | 0.87 (0.27) | -0.14 | .611 | 1.00 (0.80) | 0.00 | .996 | 0.88 (0.27) | -0.13 | .643 | 0.88 (0.27) | -0.13 | .642 |
| Gender (0 = Female, 1 = Male) | 1.80** (0.20) | 0.59 | .003 | 1.58* (0.19) | 0.46 | .019 | 1.58* (0.19) | 0.46 | .019 | 0.72 (0.69) | -0.33 | .635 | 1.60* (0.20) | 0.47 | .019 |
| Poverty Status (0 = No, 1 = Yes) | 2.43** (0.28) | 0.89 | .002 | 2.38** (0.28) | 0.87 | .002 | 2.38** (0.28) | 0.87 | .002 | 2.35** (0.27) | 0.85 | .002 | 4.61 (0.80) | 1.53 | .057 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 8.23** (0.31) | 2.11 | <.001 | 7.94** (0.31) | 2.07 | <.001 | 7.96** (0.31) | 2.07 | <.001 | 7.91** (0.32) | 2.07 | <.001 | 7.95** (0.31) | 2.07 | <.001 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems | - | - | - | 1.51** (0.14) | 0.41 | .004 | 1.54* (0.17) | 0.43 | .011 | 1.06 (0.33) | 0.06 | .867 | 1.65** (0.15) | 0.50 | .001 |
| Interactions | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems x <i>Race</i> | - | - | - | - | - | - | 0.93 (0.41) | -0.07 | .861 | - | - | - | - | - | - |
| Externalizing Behavior Problems x <i>Gender</i> | - | - | - | - | - | - | - | - | - | 1.61 (0.42) | 0.48 | .256 | - | - | - |
| Externalizing Behavior Problems x <i>Poverty</i> | - | - | - | - | - | - | - | - | - | - | - | - | 0.69 (0.42) | -0.36 | .385 |

Note. Odds ratios greater than one reflect a greater likelihood of receiving special education services in fifth grade, whereas odds ratio values less than one indicate being less likely to receive special education services in fifth grade.

p* < .05, *p* < .01

Grade retention. Gender and poverty status significantly predicted experiencing at least one grade retention by fifth grade in Model 1 (see Tables 12 and 13). Students who were male were twice as likely to have at least one grade retention in comparison to females ($OR = 2.00, p < .01$), and students who were poor were 3.38 times more likely to be retained in comparison to students who were not poor ($p < .01$). Although Black students had an odds ratio that was greater than 1, suggesting they were more likely to experience at least one grade retention, this prediction was not significant ($OR = 1.57, p = .07$). In Model 2, there was a 518% increase in odds for being retained for every one-unit increase in weak approaches to learning ($OR = 6.18, p < .001$) (see Table 12) and a 71% increase in odds for being retained for every one-unit increase in externalizing behavior problems ($OR = 1.71, p < .001$) (see Table 13). The results in Models 3, 4, and 5 suggest that student demographics did not moderate the relationship between externalizing behavior problems and grade retention, however, race and gender significantly moderated the relationship between weak approaches to learning and grade retention (see Figures 1 and 2). For every one-unit increase in weak approaches to learning, the odds ratio for White students experiencing at least one grade retention was 4.85, whereas the odds ratio for Black students was 2.78 times that of White students ($OR = 13.46$). In regards to gender, for every one-unit increase in weak approaches to learning the odds ratio for male students was 4.35, whereas the odds ratio for female students was nearly three times that of male students ($OR = 12.55$). These findings indicate that among students with perceived weak approaches to learning, those who were Black or female were even more likely to be retained at least once in comparison to their White or male peers with weak approaches to learning.

Table 12

Summary of Logistic Regression for Weak Approaches to Learning Predicting Grade Retention

| Variable | Model 1: Student Demographics | | | Model 2: Weak Approaches to Learning | | | Model 3: Weak Approaches to Learning x Race | | | Model 4: Weak Approaches to Learning x Gender | | | Model 5: Weak Approaches to Learning x Poverty | | |
|--|-------------------------------|-----------|----------|--------------------------------------|-----------|----------|---|-----------|----------|---|-----------|----------|--|-----------|----------|
| | <i>n</i> = 5,576 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | |
| | <i>OR</i> (<i>SE</i>) | <i>Ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>Ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 1.57 (0.24) | 0.45 | .065 | 1.25 (0.25) | 0.22 | .380 | 0.10* (1.16) | -2.31 | .047 | 1.20 (0.24) | 0.18 | .451 | 1.25 (0.25) | 0.22 | 0.380 |
| Gender (0 = Female, 1 = Male) | 2.00** (0.22) | 0.70 | .002 | 1.19 (0.24) | 0.17 | .472 | 1.21 (0.24) | 0.19 | .424 | 14.37** (0.87) | 2.67 | .002 | 1.19 (0.24) | 0.17 | 0.475 |
| Poverty Status (0 = No, 1 = Yes) | 3.38** (0.22) | 1.22 | <.001 | 2.58** (0.23) | 0.95 | <.001 | 2.68** (0.24) | 0.99 | <.001 | 2.65** (0.23) | 0.97 | <.001 | 2.19 (1.14) | 0.78 | 0.494 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 2.01* (0.29) | 0.70 | .017 | 1.37 (0.35) | 0.31 | .37 | 1.33 (0.37) | 0.28 | .441 | 1.37 (0.34) | 0.32 | .352 | 1.37 (0.35) | 0.31 | 0.372 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Weak Approaches to Learning | - | - | - | 6.18** (0.19) | 1.82 | <.001 | 4.84** (0.22) | 1.58 | <.001 | 12.59** (0.31) | 2.53 | <.001 | 6.07** (0.23) | 1.80 | <.001 |
| Interactions | | | | | | | | | | | | | | | |
| Weak Approaches to Learning x Race | - | - | - | - | - | - | 2.78* (0.43) | 1.02 | .019 | - | - | - | - | - | - |
| Weak Approaches to Learning x Gender | - | - | - | - | - | - | - | - | - | 0.35** (0.37) | -1.06 | .004 | - | - | - |
| Weak Approaches to Learning x Poverty | - | - | - | - | - | - | - | - | - | - | - | - | 1.07 (0.45) | 0.07 | 0.878 |

Note. Odds ratios greater than one reflect a greater likelihood of experiencing at least one grade retention by fifth grade, whereas odds ratio values less than one indicate being less likely to experience at least one grade retention by fifth grade.

p* < .05, *p* < .0

Table 13

Summary of Logistic Regression for Externalizing Behavior Problems Predicting Grade Retention

| Variable | Model 1: Student Demographics | | | Model 2: Externalizing Behavior Problems | | | Model 3: Externalizing Behavior Problems x Race | | | Model 4: Externalizing Behavior Problems x Gender | | | Model 5: Externalizing Behavior Problems x Poverty | | |
|--|-------------------------------|------|-------|--|------|-------|---|-------|-------|---|-------|-------|--|-------|-------|
| | N = 5,576 | | | N = 5,570 | | | N = 5,570 | | | N = 5,570 | | | N = 5,570 | | |
| | OR (SE) | ln | p | OR (SE) | ln | p | OR (SE) | ln | p | OR (SE) | ln | p | OR (SE) | ln | p |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 1.57 (0.24) | 0.45 | .065 | 1.42 (0.25) | 0.35 | .164 | 0.74 (0.71) | -0.30 | .677 | 1.40 (0.25) | 0.34 | .174 | 1.44 (0.25) | 0.36 | .148 |
| Gender (0 = Female, 1 = Male) | 2.00** (0.22) | 0.70 | .002 | 1.69* (0.22) | 0.52 | .019 | 1.70** (0.22) | 0.53 | .019 | 3.04 (0.58) | 1.11 | .054 | 1.73* (0.21) | 0.55 | .011 |
| Poverty Status (0 = No, 1 = Yes) | 3.38** (0.22) | 1.22 | <.001 | 3.32** (0.22) | 1.20 | <.001 | 3.33** (0.22) | 1.20 | <.001 | 3.35** (0.22) | 1.21 | <.001 | 8.63** (0.74) | 2.16 | .004 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 2.01* (0.29) | 0.70 | .017 | 1.88* (0.30) | 0.63 | .035 | 1.85* (0.31) | 0.61 | .047 | 1.91* (0.30) | 0.65 | .030 | 1.91* (0.30) | 0.65 | .031 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems | - | - | - | 1.71** (0.14) | 0.54 | <.001 | 1.53* (0.17) | 0.43 | .011 | 2.19** (0.25) | 0.78 | .002 | 1.97** (0.17) | 0.68 | <.001 |
| Interactions | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems x Race | - | - | - | - | - | - | 1.41 (0.29) | 0.34 | .249 | - | - | - | - | - | - |
| Externalizing Behavior Problems x Gender | - | - | - | - | - | - | - | - | - | 0.71 (0.29) | -0.34 | .243 | - | - | - |
| Externalizing Behavior Problems x Poverty | - | - | - | - | - | - | - | - | - | - | - | - | 0.59 (0.40) | -0.52 | .197 |

Note. Odds ratios greater than one reflect a greater likelihood of experiencing at least one grade retention by fifth grade, whereas odds ratio values less than one indicate being less likely to experience at least one grade retention by fifth grade.

* $p < .05$, ** $p < .01$

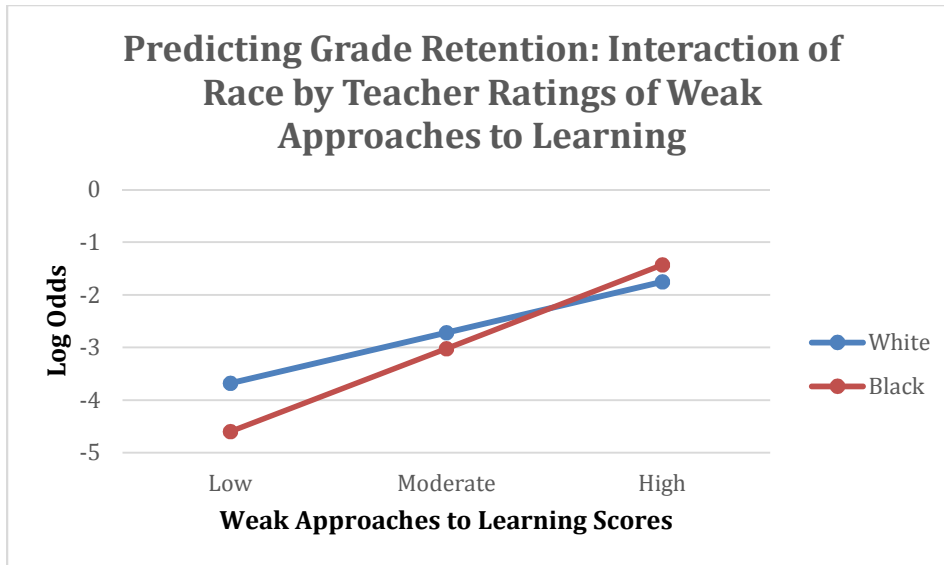


Figure 1

Interaction Graph of Race by Weak Approaches to Learning for Predicting Grade Retention

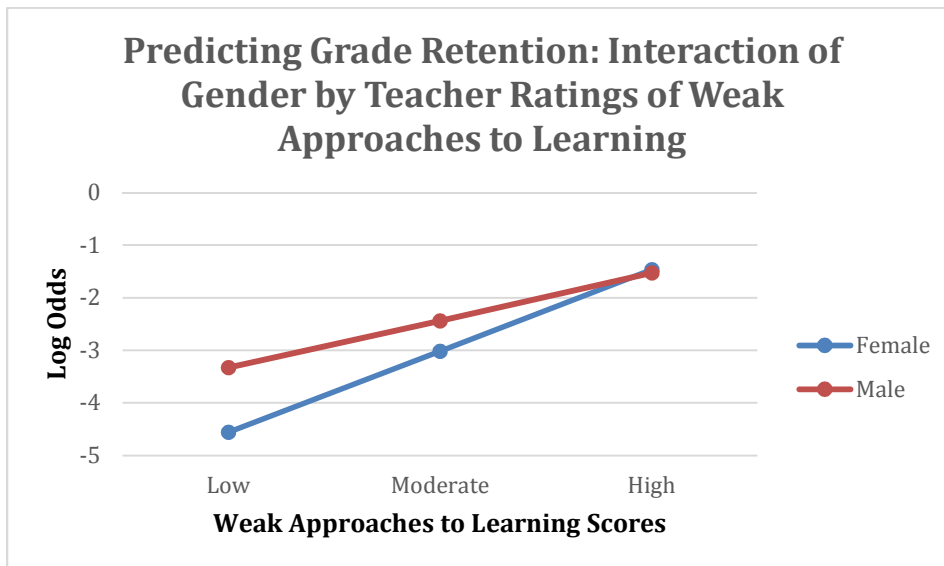


Figure 2

Interaction Graph of Gender by Weak Approaches to Learning for Predicting Grade Retention

School suspension. In Model 1, race and gender significantly predicted receiving at least one school suspension by eighth grade. Black students were 3.37 times more likely to be suspended in comparison to White students ($p < .001$), and male students were 3.68 times more likely to be suspended in comparison to female students ($p < .001$) (see Tables 14 and 15). In Model 2, there was a 196% increase in odds for being suspended ($OR = 2.96, p < .001$) for every one-unit increase in weak approaches to learning (see Table 14), and a 224% increase in odds for being suspended by eighth grade for every one-unit increase in externalizing behavior problems ($OR = 3.24, p < .001$) (see Table 15). The results in Models 3, 4, and 5 indicated that student demographics did not moderate the relationship between externalizing behavior problems and school suspension; however, race significantly moderated the relationship between weak approaches to learning and school suspension (see Figure 3). For every one-unit increase in weak approaches to learning, the odds ratio for experiencing at least one school suspension for White students was 2.51, and for Black students the odds ratio was 4.67, which is 1.86 times the odds ratio for White students with weak approaches to learning. These findings suggest that Black students with weak approaches to learning were more likely to receive at least one school suspension by eighth grade in comparison to their peers.

Table 14

Summary of Logistic Regression for Weak Approaches to Learning Predicting School Suspension

| Variable | Model 1: Student Demographics | | | Model 2: Weak Approaches to Learning | | | Model 3: Weak Approaches to Learning x Race | | | Model 4: Weak Approaches to Learning x Gender | | | Model 5: Weak Approaches to Learning x Poverty | | |
|---|-------------------------------|-----------|----------|--------------------------------------|-----------|----------|---|-----------|----------|---|-----------|----------|--|-----------|----------|
| | <i>n</i> = 5,068 | | | <i>n</i> = 5,063 | | | <i>n</i> = 5,063 | | | <i>n</i> = 5,063 | | | <i>n</i> = 5,063 | | |
| | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 3.37** (0.21) | 1.21 | <.001 | 3.09** (0.20) | 1.13 | <.001 | 0.79 (0.66) | -0.24 | .711 | 3.15** (0.21) | 1.15 | <.001 | 3.12** (0.21) | 1.14 | <.001 |
| Gender (0 = Female, 1 = Male) | 3.68** (0.14) | 1.30 | <.001 | 2.83** (0.14) | 1.04 | <.001 | 2.92** (0.14) | 1.07 | <.001 | 1.64 (0.68) | 0.50 | 0.462 | 2.82** (0.14) | 1.04 | <.001 |
| Poverty Status (0 = No, 1 = Yes) | 0.96 (0.30) | -0.04 | .898 | 0.75 (0.29) | -0.29 | .307 | 0.73 (0.30) | -0.32 | .289 | 0.74 (0.29) | -0.30 | 0.303 | 0.37 (0.80) | -1.00 | .213 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 1.10 (0.35) | 0.10 | .780 | 0.87 (0.35) | -0.14 | .697 | 0.84 (0.35) | -0.17 | .617 | 0.87 (0.35) | -0.14 | 0.699 | 0.87 (0.35) | -0.14 | .685 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Weak approaches to learning | - | - | - | 2.96** (0.15) | 1.09 | <.001 | 2.50** (0.14) | 0.92 | <.001 | 2.47** (0.30) | 0.90 | 0.003 | 2.83** (0.17) | 1.04 | <.001 |
| Interactions | | | | | | | | | | | | | | | |
| Weak Approaches to Learning x Race | - | - | - | - | - | - | 1.86* (0.28) | 0.62 | .027 | - | - | - | - | - | - |
| Weak Approaches to Learning x Gender | - | - | - | - | - | - | - | - | - | 1.29 (0.31) | 0.26 | 0.409 | - | - | - |
| Weak Approaches to Learning x Poverty | - | - | - | - | - | - | - | - | - | - | - | - | 1.34 (0.34) | 0.30 | .379 |

Note. Odds ratios greater than one reflect a greater likelihood of experiencing at least one school suspension by eighth grade, whereas odds ratio values less than one indicate being less likely to experience at least school suspension by eighth grade.

p* < .05, *p* < .01

Table 15

Summary of Logistic Regression for Externalizing Behavior Problems Predicting School Suspension

| Variable | Model 1: Student Demographics | | | Model 2: Externalizing Behavior Problems | | | Model 3: Externalizing Behavior Problems x Race | | | Model 4: Externalizing Behavior Problems x Gender | | | Model 5: Externalizing Behavior Problems x Poverty | | |
|---|-------------------------------|-----------|----------|--|-----------|----------|---|-----------|----------|---|-----------|----------|--|-----------|----------|
| | <i>n</i> = 5,576 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | | <i>n</i> = 5,570 | | |
| | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>Ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> | <i>OR</i> (<i>SE</i>) | <i>ln</i> | <i>p</i> |
| Student Demographics | | | | | | | | | | | | | | | |
| Race (0 = White, 1 = Black) | 3.37** (0.21) | 1.21 | <.001 | 2.88** (0.22) | 1.06 | <.001 | 3.94* (0.60) | 1.37 | .023 | 2.85** (0.22) | 1.05 | <.001 | 2.88** (0.22) | 1.06 | <.001 |
| Gender (0 = Female, 1 = Male) | 3.68** (0.14) | 1.30 | <.001 | 2.75** (0.15) | 1.01 | <.001 | 2.75** (0.15) | 1.01 | <.001 | 4.04* (0.55) | 1.40 | .011 | 2.74** (0.15) | 1.01 | <.001 |
| Poverty Status (0 = No, 1 = Yes) | 0.96 (0.30) | -0.04 | .898 | 0.87 (0.30) | -0.13 | .657 | 0.88 (0.30) | -0.13 | .661 | 0.88 (0.30) | -0.13 | .676 | 0.53 (0.82) | -0.63 | .439 |
| Special Education (Kindergarten) (0 = No, 1 = Yes) | 1.10 (0.35) | 0.10 | .780 | 0.88 (0.38) | -0.13 | .738 | 0.89 (0.38) | -0.11 | .769 | 0.89 (0.37) | -0.12 | .751 | 0.87 (0.39) | -0.14 | .720 |
| Teacher Behavior Ratings | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems | - | - | - | 3.24** (0.14) | 1.17 | <.001 | 3.40** (0.16) | 1.22 | <.001 | 3.79** (0.25) | 1.33 | <.001 | 3.11** (0.16) | 1.14 | <.001 |
| Interactions | | | | | | | | | | | | | | | |
| Externalizing Behavior Problems x Race | - | - | - | - | - | - | 0.85 (0.31) | -0.17 | .597 | - | - | - | - | - | - |
| Externalizing Behavior Problems x Gender | - | - | - | - | - | - | - | - | - | 0.81 (0.29) | -0.21 | .459 | - | - | - |
| Externalizing Behavior Problems x Poverty | - | - | - | - | - | - | - | - | - | - | - | - | 1.29 (0.37) | 0.25 | .493 |

Note. Odds ratios greater than one reflect a greater likelihood of experiencing at least one school suspension by eighth grade, whereas odds ratio values less than one indicate being less likely to experience at least school suspension by eighth grade.

p* < .05, *p* < .01

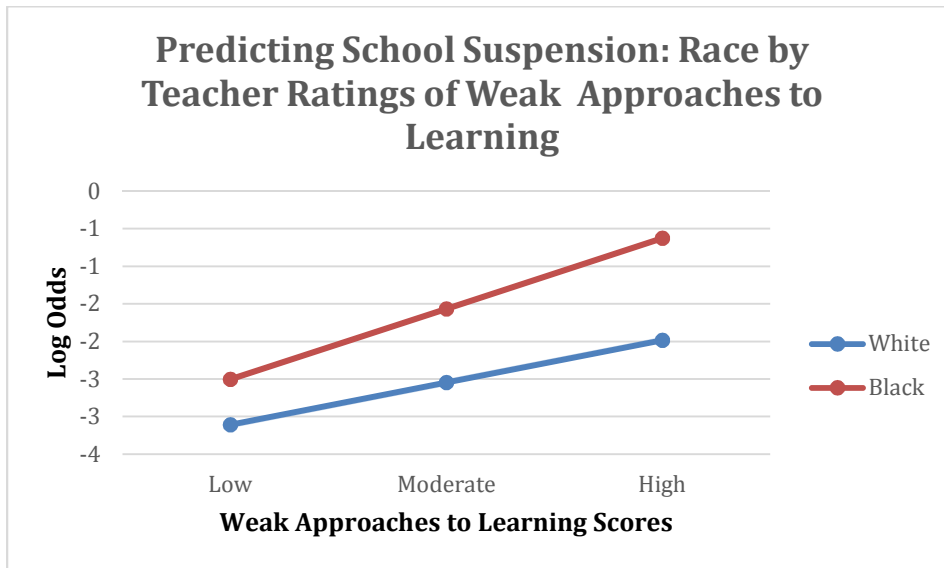


Figure 3

Interaction Graph of Race by Learning Behaviors for Predicting School Suspension

Correlational Analyses

To examine the extent to which special education placement by fifth grade, grade retention by fifth grade, and the presence of at least one school suspension by eighth grade related to each other, a series of Pearson product moment correlations were conducted. As shown in Table 16, across these three school outcomes the relationships were statistically significant but weak. The strongest correlations were between special education and grade retention ($r = .16, p < .001$), followed by grade retention and school suspension ($r = .13, p < .001$). The relationship between special education and school suspension was the weakest amongst the three ($r = .07, p < .001$). To further explore these correlations, frequencies were calculated to determine the proportion of students who had experienced the two outcomes explored in these bivariate relationships (see Tables 17-19). In order for variables to be highly correlated with each other, a high proportion of students would need to experience both school outcomes and neither school

outcomes. As seen in Tables 17 through 19, less than 4% of the sample had experienced both school outcomes in each of the three bivariate relationships explored.

Table 16.

Correlations of Special Education, Grade Retention, and School Suspension

| | Special Education in Grade 5 | Grade Retention by Grade 5 | School Suspension by Grade 8 |
|------------------------------|------------------------------|----------------------------|------------------------------|
| Special Education in Grade 5 | 1.00 | | |
| Grade Retention by Grade 5 | .16** | 1.00 | |
| School Suspension by Grade 8 | .07** | .13** | 1.00 |

* $p < .05$, ** $p < .01$

Table 17

Cross Tabulation Frequencies of Special Education by Grade Retention (n = 5,627)

| | | Grade Retention | | Row Total |
|-------------------|-----|-----------------|--------------|----------------|
| | | No | Yes | |
| Special Education | No | 4,183 (79.98%) | 323 (9.55%) | 5,136 (89.53%) |
| | Yes | 375 (7.52%) | 116 (2.95%) | 491 (10.47%) |
| Column Total | | 5,188 (87.50%) | 439 (12.50%) | 5,627 (100%) |

Table 18

Cross Tabulation Frequencies of Special Education by School Suspension (n = 5,109)

| | | School Suspension | | Row Total |
|-------------------|-----|-------------------|--------------|----------------|
| | | No | Yes | |
| Special Education | No | 4,151 (74.66%) | 536 (15.23%) | 4,687 (89.89%) |
| | Yes | 326 (7.51%) | 96 (2.59%) | 422 (10.11%) |
| Column Total | | 4,477 (82.18%) | 632 (17.82%) | 5,109 (100%) |

Note: 518 cases were missing

Table 19

Cross Tabulation Frequencies of Grade Retention by School Suspension (n = 5,109)

| | | School Suspension | | Row Total |
|-----------------|-----|-------------------|-----------------|-------------------|
| | | No | Yes | |
| Grade Retention | No | 4,206 (74.45%) | 543 (14.26%) | 4,749 (88.70%) |
| | Yes | 271 (7.73%) | 89 (3.57%) | 360 (11.30%) |
| Column Total | | 4,477 (82.18%) | 632 (17.82%) | 5,109 (100%) |

Note: 518 cases were missing

Chapter V: Discussion

The purpose of this study was to explore the long-term outcomes of youth who were perceived as having behavioral problems in early elementary school by teachers (i.e., kindergarten and first grade). More specifically, this study examined the extent to which teacher-reported problems with classroom behavior predicted receiving special education services in fifth grade, experiencing at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade. Additionally, this study explored how race (i.e., Black and White students), gender, and poverty status (i.e., student's family is below the poverty line or at or above the poverty line) moderated the relationship between teacher behavior ratings and the three aforementioned school outcomes. These child demographic variables were included in the analyses as moderators because it was hypothesized that they would strengthen those relationships. Lastly, this study explored the extent to which special education, grade retention, and school discipline outcomes were associated with each other.

This chapter summarizes the results of the current study as well as compares key findings to the current literature. Additionally, this chapter includes implications for school psychologists, contributions to the literature, limitations, and future directions.

Teacher-Reported Early Problems with Classroom Behavior Predicting School Outcomes

The purpose of the first research question was to examine the extent to which teacher-reported problems with classroom behavior (i.e., weak approaches to learning, externalizing behavior problems) predicted special education status in fifth grade, receiving at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade. Student

demographic variables (i.e., race, gender, poverty status) were controlled for because it was hypothesized that these variables could potentially influence outcomes. The purpose of the second research question was to examine the extent to which the aforementioned student demographics moderated the relationships between teacher-reported problems with classroom behavior and school outcomes. The current researcher hypothesized that teacher ratings of classroom behavior problems would predict the aforementioned school outcomes, and that race, gender, and poverty status would strengthen those relationships. More specifically, it was expected that the relationships would be stronger for students who were Black, male, or poor in comparison to students who were White, female, or not in poverty. The purpose of the third research question was to examine the extent to which being placed in special education by fifth grade, receiving at least one grade retention by fifth grade, and receiving at least one school suspension related to each other. It was hypothesized that these three school outcomes would be associated with each other. Findings within the context of the current literature are presented below.

Special education. It was hypothesized that perceived weak approaches to learning and externalizing problems in early elementary school (i.e., kindergarten and first grade) would significantly predict being placed in special education in fifth grade. Supporting this hypothesis, the current study found that both teacher ratings of early classroom behavior problems predicted special education placement in fifth grade. These findings are consistent with previous studies that found teacher reports of weak approaches to learning and externalizing behavior problems in early elementary school significantly predicted receiving special education services by the end of elementary school (Darney et al., 2013; Hibel et al., 2010; Reinke et al., 2008; Macmillan et al., 1996). In this study, weak approaches to learning had nearly four times the odds of externalizing

behavior problems for predicting special education placement. These findings suggest that children who are rated as having more difficulties with approaches to learning (e.g., being organized, attentive, eager to learn) were at a higher risk for being placed in special education in comparison to youth with higher ratings of externalizing behaviors (e.g., fighting, arguing, disrupting classroom activities). Most studies in the current literature exploring early behavioral predictors of special education placement focus on externalizing behavior problems (Darney et al., 2013; MacMillan et al., 1996; Reinke et al., 2008). Perhaps this has been a focus within the literature because externalizing behaviors in the classroom have been found to influence a teacher's decision to refer the child for special education (Shaywitz et al., 1990). These types of behaviors could especially influence educational professionals' decision making on how to address the behavior if the child is perceived as being disruptive to the class, negatively impacting the learning of other children, or inducing stress within the teacher.

On the other hand, weak approaches to learning may be more predictive of future special education placement than externalizing behavior because these behaviors are more likely to be related to academic success. Longitudinal studies have found that approaches to learning in kindergarten significantly predicted reading and math achievement throughout elementary school (Li-Grinning et al., 2010; McClelland et al., 2006). In other words, children who were rated as being more attentive, engaged, and persistent on tasks were more likely to succeed academically in school. These skills were not only associated with achievement, but also with achievement growth over time. Kindergarteners with higher approaches to learning demonstrated more academic growth than their peers, resulting in an achievement gap that widened between kindergarten and second grade and then remained stable through elementary school (Li-Grinning et al., 2006). Children who were rated by their teachers as being more off-task, less engaged,

and more unorganized were less likely to be academically successful in school and were less likely to catch up to their same grade peers. These youth with weak approaches to learning may be not be reaching grade-level benchmarks, which in turn makes them more likely to be identified as needing special education services. The findings of this study highlight the need to expand research on behavioral predictors of special education placement by not only focusing on externalizing problems but also approaches to learning contribute to special education placement.

The odds of being placed in special education by fifth grade for youth with teacher ratings of classroom behavior problems did not vary as a function by race, gender, or poverty status. In other words, the main effect for classroom behavior problems predicting special education placement did not depend on being male, Black, or poor. The odds for being placed in special education by fifth grade increased for Black students with weak approaches to learning and for male students with externalizing behavior problems, however neither of these findings were significant.

Grade retention. It was expected that perceived weak approaches to learning and externalizing behavior problems in early elementary school would also significantly predict receiving at least one grade retention by fifth grade. Findings of this study supported that hypothesis; both classroom behavior problems predicted receiving at least one grade retention by fifth grade. These results correspond with earlier studies that found early elementary school youth with higher ratings of externalizing problem behaviors were at-risk for being retained in comparison to their peers (Blair, 2001; Jimerson et al., 1997). Previous studies have primarily examined how externalizing problem behaviors predict grade retention, however the current study contributes to the literature by including weak approaches to learning. Of note, weak approaches to learning had 3.5 times the odds of externalizing behavior problems for predicting

the receipt of at least one grade retention by fifth grade. These findings demonstrate that although perceived externalizing behavior problems increased a student's likelihood for being retained, problems with approaches to learning placed children at an even higher risk for being retained. Children are often recommended for grade retention with the hope that repeating a grade will allow them more time to mature and catch up to their peers behaviorally and academically (Frey et al., 2005; Jimerson et al., 1997). Perhaps some educational professionals perceive that repeated instruction would be beneficial for youth who appear to have more difficulties with persisting on tasks, paying attention, and learning independently. Additionally, weak approaches to learning in kindergarten have been associated with lower academic achievement in both reading and math and less achievement growth over time in elementary school (Li-Grinning et al., 2010; McClelland et al., 2006). Because poorer approaches to learning behaviors are associated with lower academic achievement, it is possible that these students aren't meeting grade level standards that would allow them to be promoted. Due to No Child Left Behind (2001), many states have adopted grade retention policies that mandate students need to reach certain benchmarks on high-stakes standardized tests in order to be promoted (Reschly & Christenson, 2013). Because these students should have been in fifth grade after No Child Left Behind was implemented, the children in this study were most likely to be subjected to the effects of the grade retention policies that followed this legislature. Therefore, students who demonstrated challenges with attentiveness, flexibility, and learning independence in kindergarten may have increased difficulties on standardized testing later in elementary school that contributed to their likelihood of being retained (Stearns et al., 2007).

In regard to moderating variables, race and gender significantly strengthened the relationship between weak approaches to learning and grade retention. Students who were Black

or female with weak approaches to learning were at an increased risk for grade retention in comparison to their White or male peers with weak approaches to learning. The increased odds for female students with weak approaches to learning being retained in comparison to male students with weak approaches to learning was unexpected due to the literature demonstrating that male students overall were more likely to be retained (Jimerson et al., 2007; Moller et al., 2006). The current researcher originally hypothesized that weak approaches to learning would place boys at an additional increased risk for being retained, however, perhaps when evaluating youth with poorer attention and organizational skills, girls perceived as having these difficulties were more noticeable to teachers in comparison to boys. Ready, LoGerfo, Burkam, and Lee (2005) conducted a study using the ECLS-K dataset and found that overall kindergarten teachers rated girls higher on approaches to learning in comparison to boys. Additionally, the researchers found that these more adaptive approaches to learning demonstrated by female students explained approximately 70% of the gender achievement gap in literacy. In the current study, it's likely that girls were expected to have stronger skills that are captured within the approaches to learning construct in comparison to boys. Therefore, when girls demonstrated behaviors such as being more inattentive and less eager to learn, they stood out as needing to be retained.

When considering child's race, the results were consistent with the researcher's hypothesis that Black youth with weak approaches to learning would be more likely to be retained in comparison to White youth with weak approaches to learning. Black youth with elevated externalizing behavior ratings were also at an increased risk for being retained in comparison to White youth with elevated externalizing behavior ratings, however this finding was not significant. These results are consistent with those of other studies that have found that Black students are at an increased risk for grade retention (Frey, 2005; Moller et al., 2006;

Warren et al., 2014). However, for Black students having weak approaches to learning in early elementary school was more predictive of grade retention than having externalizing behavior problems. These results suggest that for Black youth with perceived behavior problems, those with difficulties such as persisting on tasks or being organized were even more likely to be recognized as needing to be retained. One possible explanation for this could possibly be related to the impact high-stakes testing has had on grade retention (Stearns et al., 2007). Scholars have suggested that the over-reliance on high-stakes testing has had a negative impact on ethnic minority students, especially because these tests are often normed on middle- and upper-class White students (Johnson, Boyden, & Pitz, 2001; Madaus & Clark, 2001; Neill & Medina, 1989). Johnson and colleagues (2001) point out that there are substantial inequalities between schools based on race and socioeconomic status, and they argue that, “high-stakes tests incorrectly assume there is a level playing field, then aggravate existing inequalities by assigning sections such as grade retention, remedial placement, diploma denial...thereby profoundly diminishing people of color’s long-term prospects” (p. 12). Overall, students with weak approaches to learning may also be negatively impacted by the effects of standardized testing due to the task demands required to be successful on the tests (e.g., persisting on tasks, sustained attention). Therefore, the negative impact standardized testing has had on Black students in combination with poorer learning-related skills may place Black students with weak approaches to learning at increased risk for being retained.

School suspension. For school suspension outcomes, teacher ratings of externalizing behavior problems and weak approaches to learning in early elementary school significantly predicted receiving at least one school suspension by eighth grade. These findings are consistent

with previous research documenting that youth with higher problem behavior ratings are at an increased risk for being suspended (Darney et al., 2013; Reinke et al., 2008; Wright et al., 2014). Wright and colleagues (2014) posited that prior problem behavior among Black youth accounted for the racial discipline gap. However, unlike the study conducted by Wright and colleagues, in this study, teacher ratings of classroom behavior problems were measured as two separate variables (i.e., weak approaches to learning and externalizing behavior problems). Wright and colleagues (2014) measured prior problem behavior by creating a variable that was comprised of the sum of the two aforementioned variables and two additional behavior variables (i.e., interpersonal skills and self control). It was important to examine weak approaches to learning and externalizing behavior problems separately because it was expected that demonstrating the latter type of perceived behavioral issue would be more likely to warrant a suspension (e.g., fighting, disrupting class, arguing).

In the current study, there was no significant interaction between race and externalizing behavior problems, meaning that the main effect of being Black on predicting school suspension did not depend on the student's levels of externalizing behavior problems. Additionally, even after including externalizing behavior ratings in the analyses, being Black remained a significant predictor of suspension. However, race significantly moderated the relationship between teacher ratings of weak approaches to learning and receiving at least one school suspension by eighth grade. In other words, among early elementary school youth who were perceived as having lower approaches to learning (i.e., difficulties with persisting on tasks and being eager to learn), Black students were at an increased risk of being suspended in comparison to White youth with weak approaches to learning.

The differences in outcomes that emerged in these findings when examining externalizing behavior ratings versus weak approaches to learning ratings highlight the need to investigate different types of behavior ratings separately. A potential explanation for the interaction between race and weak approaches to learning is that Black youth who were perceived as having difficulties with approaches to learning at an early age were at an increased risk of appearing disengaged from school over time. Scholars have described the pattern of discipline as a cycle in which school suspensions results in missed instructional time, which leads to lower academic engagement and achievement, which in turn leads to more rule-breaking behavior (Arcia, 2006; Gregory et al., 2010). Therefore, academic disengagement may have played a role in Black students' increased risk for school suspension. Additionally, researchers have found that Black students are more likely to be suspended for infractions that are more subjectively defined such as defiance, disrespect, and loitering (Gregory & Weinstein, 2008; Skiba et al., 2011; Skiba et al., 2002). Perhaps among students who are less engaged from school, Black students were more likely to get in trouble for demonstrating these types of subjectively defined behaviors in comparison to White students.

Relationship Between Special Education, Grade Retention, and School Suspension

The last research question of this study explored the extent to which special education status in fifth grade, experiencing at least one grade retention by fifth grade, and receiving at least one school suspension by eighth grade relate to each other. The results in the current study suggested a significant but weak relationship among all three school outcomes. It is likely that the relationships between these variables were weak because a small proportion of students (i.e., less than 4%) within the sample had experienced two of those outcomes at a time (i.e., being placed in special education in fifth grade and receiving at least one school suspension by eighth

grade). These relationships likely were statistically significant due to the ECLS-K large sample size. Findings for research questions one and two found that youth with teacher ratings of classroom behavior problems in early elementary school were more likely to experience each of these three school outcomes. The weak correlations among these outcomes suggests that youth who are perceived to be behaviorally at risk can potentially be on different paths that lead them to experience different long-term outcomes. Other variables not included in this study (e.g., school-level factors, academic achievement) could possibly contribute to a behaviorally at-risk youth being recommended for special education, grade retention, or receiving a suspension instead of experiencing multiple poor outcomes.

In the study conducted by Sullivan and Bal (2013), students were less likely to be placed in special education if they were enrolled in a school that had higher rates of grade retention. School-level variables were not included in the analyses of the current study. However, it is possible that schools within the ECLS-K sample differed in how they addressed learning and behavioral issues. The weak relationship between grade retention and school suspension is inconsistent with the findings presented by Marchbanks and colleagues (2013) who found that receiving at least one school suspension predicted being retained in later grades. The weak correlation found between special education and school suspension was also inconsistent with previous research that found that suspension predicted being placed in special education and vice versa (Achilles et al., 2007; Bowman-Perrot et al., 2013; Krezmien et al., 2006; Losen & Gillespie, 2012; Sullivan & Bal, 2013). Perhaps the association between these two variables was weak because the present study did not examine the relationships between suspensions and student disability category. The findings regarding the relationships with school suspension also may be inconsistent with the literature because the current study used Pearson Product Moment

Correlations instead of logistic regression analyses. Unlike the previously cited studies, the ECLS-K does not provide information on when throughout their schooling the child had received a suspension. Therefore, examining the relationships amongst these variables was deemed more appropriate than examining how the outcomes predicted each other.

Implications for Practice

Disproportionality in special education, grade retention, and school suspension has been a problem within education for decades. Thus, the findings of this study have many implications for school psychologists, teachers, administrators, and policymakers. Implications for the current investigation using the ECLS-K database are discussed below.

The present study provides evidence that teacher ratings of classroom behavior at early elementary school have academic and behavioral implications for youth over time; these youth are at an increased risk for being referred for special education, grade retention, or being suspended from school. Therefore, it is critical that educators not only identify youth with behavioral problems at an early age, but also increase efforts to provide them with evidence-based interventions before they become susceptible to these outcomes (Darney et al., 2013; Reinke et al., 2008). The use of behavioral screeners to identify at-risk youth is key to ensuring that they receive services (Reinke et al., 2008). Duncan and colleagues (2007) suggested that early elementary teachers could adopt more play-based curricula when teaching children early literacy and numeracy skills. Unlike the traditional “drill-and-practice” approach, play-based curricula can help foster learning-related behaviors such as task engagement and attention skills. Addressing the academic and behavioral needs of youth within a multi-tiered system of support (MTSS) can help schools reduce disproportionality in special education, grade retention, and school discipline (NASP, 2013). Additionally, supporting the implementation of school-wide

positive behavioral interventions and support (SWPBIS) within an MTSS framework is important for preventing behavior problems before they occur (Blake et al., 2011; NASP, 2013; Skiba et al., 2011).

In regard to disproportionality, schools need to make continuous efforts to analyze their data and evaluate the extent to which students of certain demographic groups are more likely to be placed in special education, retained, or suspended, identify goals for reducing disproportionality, and implementing evidence-based interventions to make progress toward those goals (NASP, 2013). These patterns need to be brought to the attention of school personnel so that they can be encouraged to reflect upon how their own biases have been impacting how they respond to students' behavioral issues (NASP, 2013). School educators need to advocate for students who have been recommended for special education and grade retention to ensure that they have been receiving interventions with fidelity within an MTSS framework (NASP, 2007). This practice is especially important when personnel observe a pattern in certain groups of students being referred more often than others. Parents also need to be empowered to advocate for their children to receive services when potential behavior issues are identified (NASP, 2013). Esler, Godber, and Christenson (2008) emphasize that schools need to engage in family outreach activities such as positive phone calls, continuous communication regarding their child's academic and behavioral progress, and practical suggestions on how to support their children's learning at home. Schools need to make ongoing efforts to ensure that parents are involved in school-based decision-making for their child.

Within this study, youth with weak approaches to learning were especially at risk for experiencing these outcomes. This was particularly true for Black students and for girls. What is interesting here is that youth who were equally weak in approaches to learning but were White or

male were not at the same risk for experiencing grade retention. Additionally, Black students with weak approaches to learning were significantly more likely to be suspended than White students with low approaches to learning. These findings suggest that it is not weak approaches to learning alone that lead to grade retention or suspension but that children from particular demographic groups experience different outcomes. A conclusion that might be drawn here is that the decision-making process for children of varying demographics is not equal. Why this is the case is not clear, although it seems likely that differential treatment stems from some type of bias in the decision-making process related to youth who demonstrate concerns in approaches to learning. Researchers have examined how racial similarity between student and teacher is related to teacher perceptions has found that teachers of the same race as a student tend to rate the student more favorably (Downey & Pribesh, 2004). Although teacher race was not considered in the current study, future studies may want to further examine how teacher race impacts decision-making for students with perceived learning/behavioral deficits.

Implications for grade retention. Previous research has found that teachers tend to rely more on practical knowledge than research when considering recommending grade retention for students (Tomchin & Impara, 1992; Witmer, Hoffman, & Notis, 2004). In other words, at times teachers view grade retention as beneficial for youth who are perceived as immature or slow learners and may need an additional year of schooling in their current grade. This recommendation could especially be the case for elementary students with perceived difficulties with attention, task engagement, and organization. Some teachers have limited knowledge regarding the research demonstrating that grade retention has been linked with negative psychological effects and minimal improvement on achievement, or they rely on their personal experiences with children who have been successful after being retained (Tomchin & Impara,

1992; Range, 2011; Witmer et al., 2004). However, even if some children may show initial improvements when they are retained, early elementary school teachers are less likely to observe the negative effects of grade retention than those who teach in later elementary and secondary grades (Range, 2011; Witmer et al., 2004). Witmer and colleagues (2004) found that third and fourth grade teachers were significantly more likely to report behavior difficulties associated with grade retention, than kindergarten, first, and second grade teachers who were more likely to report that grade retention assists with helping master basic skills. It is especially important to note that in the current study, boys and White students with weak approaches to learning were more likely to be promoted to the next grade than girls and Black students with the same perceived levels of difficulties with approaches to learning. This suggests that teachers may draw different conclusions on recommending students for grade retention based on race or gender when they have similar levels of weak approaches to learning. Perhaps the behaviors within the approaches to learning (e.g., eagerness to learn) construct could be rated more subjectively by teachers than externalizing behaviors (e.g., fighting). Therefore, it is possible that teacher bias could impact recommendations for how to address the needs of students who appear to be struggling in school.

To address this issue, teacher preparatory programs and ongoing professional development can help teachers remain abreast of current research on the effectiveness of grade retention and considering how their own biases may impact decision-making. Schools need to work toward adopting interventions that could be beneficial to students as alternatives to retention, such as highly structured after-school and summer programming, and increasing the amount of academic and behavioral supports students would receive through MTSS (Bowman, 2005; Jimerson et al., 2006). When recommending retention, teachers should ask themselves in

what ways an additional year of the curriculum will help these students meet grade-level expectations . The decision to retain a child should also be a team decision consisting of practitioners and parents in addition to just the classroom teacher, and should be based on multiple sources of data (Range, 2011).

Implications for school discipline. Black students with higher ratings of weak approaches to learning were at an increased risk for being suspended in comparison to White students with similar behavior ratings. This finding was unexpected because the behaviors within the approaches to learning measure typically would not warrant a discipline referral as often as externalizing behaviors would. This raises the question of what type of referrals these students were receiving, which unfortunately was not available within the ECLS-K dataset. Perhaps Black students with weak approaches to learning were more likely to be referred for behavioral infractions that may be interpreted as subjective such as “disrespect” or “loitering” (Skiba et al., 2011). School staff should evaluate their discipline policies in how clearly defined subjective infractions are defined and consistently implemented as resulting in a suspension (Blake et al., 2011; Skiba et al., 2011; NASP, 2013). Schools also need to identify ways to increase student engagement rather than rely on punitive discipline measures that make youth feel more disengaged from school (Gregory et al., 2010; Skiba et al., 2011). Additionally, adequate support needs to be provided to teachers in order to implement SWPBIS with fidelity so that personnel are not relying on punitive measures to address behavior. Parents also need to be empowered to advocate for their children to receive services when potential behavior issues are identified (NASP, 2013). This practice would be especially important for youth with perceived higher levels of externalizing behaviors who are particularly at risk to be suspended by eighth grade.

Overall, the findings of this study demonstrate that early elementary school teachers perceive youth who are at risk for special education, grade retention, and school suspension as having behavioral issues at an early age. Additionally, youth of certain demographic backgrounds (i.e., Black, female) were at an elevated risk for grade retention and/or suspension when they were perceived as having difficulties with task-engagement behaviors. Early intervention efforts are needed to prevent students from being vulnerable to these outcomes, and teachers and school staff need to consider how student background influences their recommendations for school-based decision making.

Contributions to the Literature

The current study makes a significant contribution to the literature on special education, grade retention, and school suspension. Previous studies who have looked at long-term outcomes for young children with behavior problems have primarily focused on perceived issues with externalizing behaviors. The current study included a measure focused on approaches to learning, which is less frequently found in the literature on special education, grade retention, or school suspension. Much of the literature also focuses on academic trajectories (i.e., performance on academic assessments) for youth with early behavioral problems. Although looking at academic achievement is important to include in studies, it is especially important to investigate how behavior variables serve as predictors for special education, grade retention, and school suspensions because these decisions are often put in place to improve school outcomes for students who are perceived to have behavioral difficulties in school. In other words, receiving special education or being retained is intended to help students become more academically successful, and being suspended is intended to deter future misbehavior. However, the literature shows that the outcomes for these students are often poor in that they continue to be at an

increased risk for academic failure, school dropout, and contact with the juvenile justice system (Jimerson et al., 1997; Morgan et al., 2008; Sullivan & Bal, 2013). Additionally, this study also contributed to the limited literature that looks at the relationships between special education, grade retention, and school suspension together. Most studies currently in the literature focus on these outcomes separately without considering how they relate to each other. Although these outcomes were weakly correlated in the current study, these findings should be replicated in future studies.

The current study was also conducted using a structural inequity theory lens to explore how the structure of the education system led to differences in treatment for students of different demographic groups. For youth who were perceived as having weak approaches to learning in early elementary school, outcomes by the end of elementary and middle school differed by race and gender. In this study, female students with poorer ratings of approaches to learning in kindergarten and first grade were more likely to be retained by fifth grade, and Black students with increased ratings of weak approaches to learning at the same time points were at greater risk for being retained by fifth grade and suspended by eighth grade. These findings have never been reported in the literature on disproportionality in education. Additionally, there are limited studies that have analyzed national longitudinal data to explore disproportionality in education. This study bringing to light the importance of identifying youth who portray difficulties with learning-related behaviors by demonstrating that certain groups are at-risk for experiencing poorer outcomes over time; therefore, it is critical that educational professionals intervene with these youth at an early age to improve student success.

Limitations of the Current Study and Directions for Future Research

A limitation of this study is the use of archival data. Although the ECLS-K provides researchers with a breadth of data with several variables, using existing data prevents the researcher from being able to collect additional data on other variables of interest. For example, in regard to investigating school suspensions, a limitation is the reliance on parent-report data rather than school records. The ECLS-K did not gather this information from school records, however this method may be a more accurate indicator of school suspensions especially for children who have experienced multiple suspensions. Additionally, parents were not asked to report the referral reason behind receiving the suspension. Previous research has shown that Black students are more susceptible to receiving exclusionary discipline for more subjective, nonviolent offenses (i.e., being disrespectful) whereas White students are more likely to experience such practices for more objective offenses (i.e., bringing a weapon to school) (Gregory & Weinstein, 2008; Skiba et al., 2011; Skiba et al., 2002). Future research including reasons why children were suspended in school will be very informative for the literature and inform public policy affecting the use of disciplinary measures within the schools.

Additionally, limited research is currently available regarding the involvement of parents in school-based decision-making. In an ethnographic study conducted by Horvat, Weininger, and Lareau (2003), they found that middle-class parents were more proactive about networking with each other and other professionals (e.g., private psychologists) to address any perceived learning or behavioral issues, and to advocate for their child when they disagreed with the school's decision-making (e.g., special education testing). In contrast, parents who were from lower socioeconomic backgrounds were much less likely to dispute assessments or other recommendations and ultimately left the decision-making up to the school. In the current study,

poverty status unexpectedly did not moderate the relationship between teacher ratings of behavior and any of the three school outcomes, however student race and gender was a moderator for being retained. It would be interesting for future research to further examine how parents of children with different demographic backgrounds involve themselves in school-based decision making when they are being referred for being retained or placed in special education.

Another potential limitation is that school suspension was measured as a dichotomous outcome instead of a continuous outcome. Previous studies have found that when students are suspended at least once, they are more likely to be suspended again (Bowman-Perrot et al., 2013). Additionally, students with repeated suspensions are more likely to experience poorer outcomes due to missed academic instruction, and increased likelihood of contact with the police (Gregory et al., 2010; Skiba et al., 2012; Townsend, 2012). However, this was unable to be included in the current study because of potential measurement issues due to the non-normal distribution of the number of school suspensions students received.

Another limitation of this study is the use of the ECLS-K public database instead of the restricted database. Within the ECLS-K public database, users do not have access to the student's primary disability identified on the IEP, what types of medical diagnoses the student has, and whether or not the child's primary placement was in general education. The number of students to which this information applied to is small; therefore in order to protect the child's identity, this information is only available to researchers using the restricted ECLS-K dataset (Tourangeau et al., 2009). Given that some students with certain disability types (i.e., EBD) and students who are primarily educated in self-contained settings are at higher risk than others for negative school outcomes, future studies should include these variables within their analyses (Achilles et al., 2007; Bowman-Perrot et al., 2013; Fierros & Conroy, 2002; Krezmien et al., 2006; Skiba et al.,

2006). The public database was utilized due to the multiple errors found in the restricted database and the recommendation by an NCES statistician to use the public database for conducting analyses when possible.

Although a strength of this study is that it was longitudinal in nature, this design also poses as a limitation because of the potential of participant attrition. Students do not remain in the study for a variety of reasons (i.e., nonresponse, not being able to follow students who move), which could have implications for this study because certain groups of students were more likely to discontinue participation in the ECLS-K than other groups. Missingness analyses revealed that students who were Black or who had been retained at least once were less likely to have suspension data; these data were collected during the last round of data collection, suggesting that it is possible these students were also less likely to remain in the study over time.

In regards to teacher behavior ratings, in the absence of observation data, there is no way to determine how accurate teacher ratings were in identifying that these youth actually demonstrated elevated problem behaviors. However, teacher perceptions are often times more important than actual levels of problem behavior because it is their perception that leads them to make referrals on the student's behalf. Future studies would also benefit from looking at parent report data to see to see how parent's perceptions of behavioral issues impacts student outcomes in comparison to teacher perceptions. An interesting finding of this study was that demographics moderated the relationship between Approaches to Learning and student outcomes (i.e., grade retention, school suspension), but not Externalizing Behaviors and school outcomes. Given that most of the current literature examining the relationship between behavior ratings and special education, grade retention, and school suspension focuses on externalizing behaviors (Darney et al., 2013; MacMillan et al., 1996; Reinke et al., 2008), this study highlights the need to conduct

future research on how learning-related behaviors relate to student outcomes. The Approaches to Learning scale is an amalgam of different constructs including organization, attentiveness, eagerness to learn, learning independence, task persistence, and flexibility. Future research should look more closely at the constructs within the scale to examine if there are certain behaviors that are more closely related to student outcomes than others.

Another limitation of this study is that three-way interactions by behavior ratings, and multiple demographic variables (e.g., race and gender) were not investigated in this study.

Various studies examining racial disproportionality have pointed out that gender and socioeconomic status contribute a role in these outcomes. Future studies using the ECLS-K should examine these types of interactions to see that if within groups there are certain students who are at an increased risk in comparison to their peers (e.g., Black boys versus Black girls).

Delimitations of this study include focusing exclusively on Black and White racial/ethnic groups. These groups were focused on within this study because of the established disparities between the two groups (NCES, 2013; Noltemeyer & McLoughlin, 2012, Skiba et al., 2012). Latino and American Indian students also belong to ethnic minority groups who are at an increased risk for school suspension (Losen & Gillspie, 2012; Skiba et al., 2011). Predictors and outcomes for students belonging to these demographic groups should be included in future studies.

Summary

In conclusion, the current study contributed to the literature on disproportionality in education by examining how classroom behavior ratings of early elementary school teachers predict outcomes for students over time, and how those outcomes vary by student demographics. Overall, as weak approaches to learning and externalizing behavior problems ratings increased,

youth were more likely to be placed in special education or retained by the end of elementary school, or suspended by the end of middle school. Students who were Black or female with increasing difficulties with behaviors that facilitate learning were at an increased risk in comparison to their peers with similar behavior issues. These findings demonstrate the need to provide early interventions and services to youth through an MTSS and SWPBIS framework so that the aforementioned outcomes can be prevented.

Although special education services and grade retention are intended to improve student outcomes of behaviorally at-risk youth, research has not supported that these students make sufficient gains to catch up to their peers; in the literature youth who experience these outcomes are more likely to continue to exhibit behavior problems in school and academic gains they made are only short-lived (Jimerson et al., 1997; Meisels & Liaw, 1993; Morgan et al., 2008). Additionally, school suspensions are intended to discourage student misbehavior, but research fails to support that students are suspended are less likely to misbehave again; in fact, experiencing one school suspension has been shown to place student's at-risk for experiencing suspension again, further removing and excluding them from the classroom and contribute to them feeling disconnected from school (Bowman-Perrot et al., 2013; Gregory et al., 2010; Raffaele Mendez, 2003). These outcomes are especially of concern to researchers because they have been documented in the literature of being strong predictors of academic failure, school dropout, and involved in the criminal justice system (Darney et al., 2013; Fabelo et al., 2011; Katsiyannis et al., 2012; Stearns et al., 2007). Future research needs to evaluate the long-term effects of early interventions in preventing these outcomes, and how schools can reduce disproportionality among youth.

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