The Relationship of Punitive and Isolating School Policies and Academic Self-Efficacy

A dissertation presented by

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Submitted to

The Department of Counseling and Applied Educational Psychology in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In the field of
School/Counseling Psychology

Northeastern University
Boston, Massachusetts
May 24, 2013
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Abstract

The purpose of this study was to investigate the relationship between race, suspensions, expulsions, grade retention, and special education placement and students’ academic self-efficacy. This study aimed to gain a greater understanding of how punitive and isolating experiences relate to the academic self-efficacy of black and white male students in elementary, middle, and high school. This study examined longitudinal data from the Special Education Elementary Longitudinal Study (SEELS) database. SEELS was commissioned by the Office of Special Education Programs (OSEP), which is part of the U.S. Department of Education. SEELS database consists of a nationally representative sample of 11,512 students who were who were ages 6 through 12 in 1999. All data was collected between the year 2000 and 2006. The sample was stratified to be representative of each disability category, as specified by 1997 Individuals with Disabilities Education Act (IDEA97) within each single-year age cohort. The SEELS database utilizes sample weights to produce population estimates and to allow the sample to represent the universe of their sampling strata. This study investigated the frequency of use of punitive and isolating school policies (suspensions, expulsions, grade retention, and special education placement) between black and white males. Punitive and isolating school policies were examined as components of a single measurement model (punitive and isolating experiences). This study also investigated how this model predicts students’ academic self-efficacy. Specifically this study used multi-group structural equation models (SEM) to investigate whether the suggested model fits black and white students differently. Results indicated that black students are disproportionately exposed to each punitive and isolating school policy and that black students demonstrated high academic self-efficacy scores across each educational level than white students. However, only small effect sizes are found for the majority of differences. The only effect sizes
that demonstrate anything beyond a medium effect were differences between suspension rates (in middle school and high school) and grade retention rates (in high school). Confirmatory factor analysis (CFA) indicated that punitive and isolating school policies do create an effective measurement model within middle school and high school but not in elementary school. Results of the SEM and multi-group analysis indicated that the theoretical model fits the data, and that the two groups (black and white students) fit the model differently. This suggests that black and white students’ experience of punitive and isolating school policies and the impact of these experiences on their academic self-efficacy are different and are not best understood by a single model.
Acknowledgments

It takes a village to write a dissertation. This dissertation and the whole of my doctoral training would not have come to fruition without the collaborative, committed, and persistent efforts of my “village”. In the following paragraphs I will acknowledge my family and friends, dissertation committee members, department faculty, training supervisors, and peers for their contributions and support through my training and dissertation.

I first have to thank and acknowledge my wife, Shawna, for her support, love, and patience throughout the entirety of my training. After listening to me babble about psychology for the entirety of our relationship, editing countless essays and reports through my doctoral training, and editing/reorganizing each chapter of my dissertation numerous times, she may be just as versed about the field as I am (just do not tell her I said that). I also have to thank my parents for a lifetime of love, support, and dinnertime discussions about psychology. I want to specifically thank my mother for the hours she spent with me, every day, as a child/adolescent reading to me, redirecting my attention, relentlessly preventing me from escaping my work, and teaching me how to persist in my education and compensate when needed. I want to thank my father for supervision and support and for hours of tedious editing through my doctoral training. I also want to thank my sister Korey and her family (Ed, Maya, and Nolan) for their love, support, and “snow days”. Finally I want to thank my friends for their support and invaluable distraction from school/work.

I want to thank Dr. Mason for chairing my dissertation and for his advisement and supervision during my doctoral training. His ability to constructively and supportively provide feedback has assisted in my development as a professional and has provided me with a learning experience on how to simultaneously foster change and build self-confidence in supervisees. I
want to thank Dr. Lifter for teaching me to always ground my work/research to theory and for always making an extra effort to show appreciation and respect to her trainees. Finally, I want to thank Dr. Kruger for his commitment to teaching and dedication to providing well thought out feedback to students no matter if it is for an essay in a first year master’s level class or for a dissertation.

I would like to thank all of the faculty and adjunct professors within the Counseling and Applied Education department for your support, your dedication to the field of psychology, and your contributions to my development. I would also like to thank my past practicum and advanced fieldwork supervisors. Although, each of my training supervisors contributed significantly and uniquely to my development, they each provided me with valuable guidance by sharing their in-depth and astute clinical expertise and shaped my confidence by trusting my abilities and acknowledging both my strengths and weakness. I would also like to give specific thanks to my early supervision and training from the clinical directors at the May Institute and my current supervisors at the Kennedy Krieger Institute. Finally, I would like to thank my peers and colleagues both at Northeastern University and at Kennedy Krieger Institute. Your support, trail blazing efforts, empathy, humbling expertise, and commissary have made an arduous, and sometimes seemingly impossible, task tolerable. I would like to specifically thank Howard Crumpton for his assistants and guidance with designing and running my statistics.
Dedication

This study is dedicated to my family: Shawna, Terry, Martin, Korey, Ed, Maya, and Nolan.

Without your love and support I would not and could not have accomplished what I have. I am very lucky to have the family that I do.

Thank you.
Chapter 1

Introduction

Policies such as suspension, expulsion, grade retention, and percentage of time out of the general education setting (special educations) are utilized to manage behavioral and academic difficulties (i.e. Skiba, 2000). Each of these school policies can be punitive and isolating to the students who experience them. When students are repeatedly exposed to these punitive and isolating policies, it is hypothesized that these experiences affect the students’ perception of their ability to achieve in school, also known as their academic self-efficacy. This study will explore the effects of these punitive and isolating school policies on students’ academic self-efficacy.

Black students are exposed to each of these school policies at a significantly higher rate than any other group, especially white students. These policies are major components of the school to prison pipeline that uses school based variables to help explain the disproportionality of minority males in the American prison system (Wald & Losen, 2003). Exposure to punitive and isolating policies in school is believed to be associated with a number of negative outcomes including lower academic achievement, school failure, as well as later incarceration (Anderson, Whipple, & Jimerson, 2002, Skiba & Rausch, 2004, Gordon et al., 2001, Blackorby & Wagner, 1996). However, little is understood about how these policies affect students’ self-efficacy. Understanding the impact of punitive and isolating experiences on students’ academic self-efficacy may contribute to the understanding of why these school policies are associated with such negative outcomes.
The present study compared the impact of suspension, expulsion, grade retention, and percentage of classes in regular education settings on the educational experiences of white and black male students as measured by ratings of their academic self-efficacy. The present study has solely analyzed data from male students to prevent any potential differences between genders from clouding the results. This study examined longitudinal data at three different educational levels within three separate structural equation models (SEM) using the Special Education Elementary Longitudinal Study (SEELS) database. These models, developed using Bandura’s cognitive behavioral theory (Bandura, 1982), were used to identify the relationships between punitive and isolating experiences and low self-efficacy.

This chapter will first discuss the cognitive behavioral theoretical perspective of this study and the significance of students’ academic self-efficacy. The next section will discuss punitive and isolating school policies that may affect students’ academic self-efficacy. The purpose of the current study, rationale, and potential benefits will then be reviewed. In the final sections, the model that was generated to conceptualize and test the interactions among the various punitive and isolating policies and their impact on academic self-efficacy, and the research questions, will be discussed.

**Theoretical Perspective: Cognitive Behavioral Theory and Academic Self-Efficacy**

For the purpose of this research, a cognitive behavioral theoretical perspective is used to explain the relationship of punitive and isolating school policies on academic self-efficacy. The model that was generated to conceptualize and test the interactions among the various punitive and isolating policies and their impact on academic self-efficacy is based on three concepts of cognitive behavioral theory, which include self-efficacy, goal orientation, and attribution. The
model used in this study was built with the assumption that these three concepts of cognitive behavioral theory are true.

Bandura (1982, 1991) described self-efficacy as the way that individuals perceive their own abilities to perform. Individuals’ beliefs about their own abilities function as a mediator, influencing their goals, level of motivation, amount of effort exerted, and amount of anxiety associated with an activity (Bandura, 1991).

An individual’s level of self-efficacy mediates goal orientation, or, in other words how one sets goals. Thus, people with positive beliefs about their own abilities tend to establish challenging goals for themselves. On the other hand, individuals with low self-efficacy set low expectations for themselves and develop a fear of failure. Individuals with low self-efficacy and high avoidance of failure often do not set goals and thus do not give themselves opportunities to disprove their own low self-perceptions (Caraway, Tucker, Reinke, & Hall, 2003).

Self-efficacy also meditates how individuals understand and perceive accomplishments and failures, through attribution. Attribution refers to the way in which each individual perceives and explains the outcome of an event. Often three domains are used to define how individuals explain successes or failures. These three domains are: locus of causality (the outcome resulting from an internal or external cause), stability (what is the likelihood of the outcome changing in the future), and controllability (can the individual affect the outcome of the event) (Weiner, 1984; 1985).

Self-efficacy can be easily applied to the academic setting. A student’s beliefs about his or her ability to perform academic tasks can influence a student’s academic goals, level of motivation in school (Schunk, 1995), amount of effort exerted, and a student’s expectations for success in class (Bandura, 1991). When students experience failure in the academic setting, they
may attribute that failure to a lack of effort, a lack of intellect, or unfairness by the teacher. Students who attribute failure to internal, stable, uncontrollable variables, such as lack of intellect, believe that they will fail despite the amount of effort they put into their work.

Academic self-efficacy and the variables that influence self-efficacy are indirectly correlated with academic behaviors such as managing academic time more effectively (Zimmerman, 2000), showing more persistence and self-regulation, monitoring academic achievement more frequently (Schunk & Pajares, 2002), and participating less in delinquent behaviors (Chung & Elias, 1996). Moreover, self-efficacy is directly correlated with students’ academic achievement across a myriad of subjects (Lent, Brown, & Larkin, 1986; Multon, Brown, & Lent, 1991; Pajares, 1996; Schunk, 1995; Schunk & Meece, 2005).

Bandura (1994) identified four sources of influence on the development of self-efficacy which include actual experience, vicarious experience, social persuasion, and physiological factors. Among these four sources, actual experience - that a person experiences success or failure - is described to have the strongest impact on self-efficacy. Actual experience can both increase and decrease self-efficacy. Positive experiences can increase self-efficacy and result in feelings of competency while negative experiences contribute to the development of low self-efficacy.

Punitive and Isolating Experiences

The school policies addressed in this study (suspension, expulsion, grade retention, and percentage of classes taken in a general education setting) were selected based on the literature from the school to prison pipeline.

Wald and Losen’s (2003) definition of the school to prison pipeline states:
A journey through school becomes increasingly punitive and isolating for its travelers. Many will be taught by unqualified teachers, tested on material they never reviewed, held back in grade, placed in restrictive special education programs, repeatedly suspended, and banished to alternative outplacements before dropping out or getting pushed out of school altogether. Without a safety net, the likelihood that these same youths will wind up arrested and incarcerated increases sharply (Wald & Losen, 2003, p. 11).

The policies addressed in this study create a “pipeline” that funnels students, specifically minority male students, from school into the American prison system. Black men are more likely to end up in prison than in college (U.S. Census Bureau, 2007). The school to prison pipeline is a way to examine school based variables to explain this disproportionality. Black students are at significantly greater risk of being exposed to the punitive and isolating school policies, which puts this group at greater risk of later incarceration.

Black students on average experience higher rates of suspensions and expulsions (Wald & Losen, 2003), grade retention (NASP, 2003), and restrictive special education placements (Skiba, Poloni-Staudinger, Gallini, Simmons, & Fegins-Azziz, 2006). Students who are suspended (Skiba & Rausch, 2004, Gordon et al., 2001), held back (Anderson, Whipple, & Jimerson, 2002), and removed from the regular education setting and placed in restrictive special education placements (Blackorby & Wagner, 1996) are at increased risk of low academic achievement and/or school failure. Exposure to these school policies increases the risk of academic failure; however, the literature is sparse on how these punitive and isolating school policies impact academic self-efficacy across elementary, middle, and high school.
Actual experience has the strongest impact on self-efficacy. Black students are more likely to actually experience these punitive and isolating school policies. Each of these school policies can be punitive and isolating to the students who experience them (i.e., Brown, 2007). Punitive, for the purpose of this paper, refers to the cognitive interpretation of the experience and is not related to the behavioral definition of punishment. Isolating refers to the experience of seclusion from their peers and removal from typical social opportunities (Skiba et al., 2006).

Suspension and expulsion are intended to punish behavior as a means of attempting to prevent it from happening again in the future. However, suspensions and expulsions tend not to be punishing in the behavioral sense (Tobin, Sugai, & Colvin, 1996; Skiba, 2000), but instead students can perceive school removal as a form of school rejection by students (Skiba, Noam, 2002; Brown, 2007). Suspensions and expulsions are also isolating because students are removed from their classrooms and peers. Likewise, grade retention is isolating because it removes a student from their original cohort of peers. It can also be punishing because it may not allow the student to have a sense of progression and often perceived by students as one of the most stressful life experiences (Jimerson, et al., 2006). Additionally, grade retention typically occurs as a consequence to academic failure or behavior difficulties. Finally, removing students from a general education classroom and placing them in a more restrictive special education placement is isolating because less time is allowed to integrate with typical peers. It can be punishing because it can be associated with feelings of stigmatization (Foster, Schmidt, & Sabatino, 1976). Also, like grade retention, this action may occur following academic or behavioral challenges; thus students may perceive special education to be reactionary to their failures instead of an attempt to help them succeed.
It is hypothesized that repeated exposure to punitive and isolating school policies would negatively impact a student’s perceptions and feelings about their academic capabilities. These students are penalized and removed from the regular education setting and experience repeated failure. Students may believe that, despite their efforts, they will continue to fail. With this belief, students may set lower goals for themselves and attempt to avoid feelings of failure. If students perceive their failures to be associated with external, stable, and uncontrolled factors such as race, they may be less willing apply themselves academically. This study will explore if exposure to these school policies result in lower academic self-efficacy, which may mediate their future academic achievement. The model used in this study is based on a larger theoretical model of the school to prison pipeline, which is provided below in Figure 1. Figure 1 aims describe the interaction between each of the variables that contribute to the school to prison pipeline. The figure was designed to show how the variables that have been utilized in the present study fit into the larger and more complex progression through the school to prison pipeline.

Figure 1
_Theoretical Model of the School to Prison Pipeline (Variables in Bold Typeface are those Included in This Study)_
**Statement of Problem, Purpose, Rationale & Potential Benefits of the Purposed Study**

Research has clearly demonstrated that suspension, expulsion, grade retention, and percentage of time outside of the general education setting are related to students’ academic achievement (Anderson, Whipple, & Jimerson, 2002; Skiba & Rausch, 2004; Gordon et al., 2001; Blackorby & Wagner, 1996). Research has also demonstrated that low self-efficacy results in less favorable outcomes for students. Thus, it is imperative to understand how school policies might be contributing to students’ academic self-efficacy. Likewise, considering the great disproportionality seen in the use of punitive and isolating school policies between black and white students, it is important to understand how these policies may be unfairly harming specific groups of students.

Most of the previous research studies on these topics only address a couple variables at a time and often use experimental designs that cannot capture the complexity of the phenomenon (i.e. Skiba & Rausch, 2004). Many of the factors involved in these relationships are intertwined and need to be explored simultaneously rather than investigated individually. To date, no study has investigated the relationship of potentially punitive and isolating school policies such as suspensions, expulsions grade retention, and percentage of class in general education (vs. special education) on academic self-efficacy with a structural equation model (SEM) approach.

The SEM approach is preferred to the linear regression approach because it permits estimates of each of the variables’ contribution in the model while accounting for the contribution of all other variables in the model, thus avoiding inclusion of overlapping contributions from each variable. In other words, it permits clear examination of each variable’s relationship to one another and the dependent variable. Further, it permits construction of latent variables (or factors) from other variables in the model.
The SEM approach is also preferred to a multiple regression analysis approach for analyzing complex models. Studies utilizing a multiple regression analysis are important for understanding how much variability the variables predict, but these methods can cause some significant problems when applied to a complex model. Multiple regression analyses assume that the dependent variables are not inter-correlated; there is no reciprocity among them (i.e., causality is unidirectional); and that there is no error within the measurements (Pedhazur, 1982; Farrell, 1994). However, each of the variables discussed in this proposed study (suspensions, expulsions, grade retention, and percentage of classes in a general education setting) fail to meet each of these assumptions because they are interconnected and their impact on dependent variables cannot be assessed in isolation.

This study is the first of its kind to address each of the punitive and isolating school policies in a simultaneous analysis across racial groups. Simultaneous analysis is important because it can control for shared variance and demonstrate relationships that could not otherwise be understood. This control of shared variance is especially important in determining how black and white students differ in their academic experience. The present study uses longitudinal data that allows the model to be tested at three different academic levels. This multi-level analysis will allow for comparisons of how well the model fits at different academic levels. Additionally, the proposed study will be the first study to address how these policies collectively influence students’ self-efficacy.

By analyzing across racial groups, this study informs how each policy affects both black and white students through the majority of their academic careers. Likewise, the analysis indicates if specific policies are more or less beneficial or detrimental on students’ self-efficacy.
during specific years of education. This analysis may provide important information for policy makers about the impact of grade retention, special education, suspensions, and expulsions.

**The Model**

The model is constructed from the four punitive and isolation policies: grade retention, suspension, expulsion, and the percentage time out of the general education setting. The model looks at the relationship between each of the punitive and isolating school policies and race. Simultaneously, these four variables create a latent variable: punitive and isolating experiences (PI). In the model, grade retention, suspension, expulsion, and the percentage of classes taken in a general education setting differ from PI. Conceptually, the model aims to use each policy to create an over-arching construct to represent the combined relationship among each of the four policies. PI is used to represent this overarching construct. The model additionally evaluates the relationship between PI and academic self-efficacy. Please see chapter four for a visual representation of the model.

**Major Research Questions**

The present study aimed to answer three major research questions. In addition, each major research question is connected to one or more sub-questions that are provided to explain how each major research question is answered. The rationale for the sub-questions is to systematically answer the larger, more complex major research questions. In the present study, the term “punitive and isolating policies” will denote the observed variables that are used within the measurement model (suspension, expulsion, grade retention, and percent of classes in the general education setting). The term “punitive and isolating experiences” will denote the latent variable that is created with the measurement model. Additionally, the term “wave” refers to the data
collection process, in which the SEELS database collected data in three waves, each on different years.

1. Does the proposed model, as displayed in Figure 4 and 5 (please see chapter 4), fit the dataset?
   a. Is the latent construct, Punitive and Isolating Experiences, supported in each wave?
   b. Does grade retention and punitive and isolating experiences have a statistically significant relationship at each educational level?
   c. Does special education placement and punitive and isolating experiences have a statistically significant relationship at each educational level??
   d. Do suspensions and punitive and isolating experiences have a statistically significant relationship at each educational level?
   e. Do expulsions and punitive and isolating experiences have a statistically significant relationship at each educational level?
   f. Do punitive and isolating experiences and academic self-efficacy have a statistically significant relationship at each educational level?

The purpose of question one is to determine whether, the proposed model is supported by the data set. The rationale for this question is to test the theoretical relationship between punitive and isolating experiences and academic self-efficacy as would be suggested by the literature of self-efficacy.

2. Is there a statistically significant difference in the distribution of punitive and isolating experiences and self-efficacy for black and white students?
   a. Is there a statistically significant difference between rate of punitive and isolating policies that black and white students are exposed to?
b. Is there a statistically significant difference between the black and white students’ academic self-efficacy scores?

c. Is there a statistically significant difference between the correlations between each punitive and isolating policy and academic self-efficacy within each wave?

The purpose of question two is to determine whether there is a statistically significant difference between black and white students’ exposure to punitive and isolating policies. Additionally, question two looks at the relationships between punitive and isolating experiences and academic self-efficacy. The rationale for this question is that a large empirical literature base suggests that black and white students are exposed to punitive and isolating experiences at different rates. Given that black students experience each punitive and isolating school policy more frequently than white students, it seems important to investigate if these policies have a more adverse impact on the self-efficacy of black students than on the self-efficacy of white students.

3. Is there a statistically significant difference between the pathway between punitive and isolating experiences and academic self-efficacy for black students and white students?

   a. Do chi-square comparisons of the multigroup analysis resulted in a significant difference between black and white students?

   The purpose of question three is to determine whether the model’s fit is different between black and white students at each educational level. Research has yielded inconsistent result on how punitive and isolating experiences may impact students’ social and emotional outcomes at different academic levels, (i.e., grade retention) (Jimerson et al., 1997; Jimerson & Ferguson, 2007; Nagin, Pagani, Tremblay, & Vitaro, 2003; Pianta, Tietbohl, & Bennett, 1997; Pagani et al., 2001; Hong & Yu, 2008). There is no evidence on the relationship among academic level, punitive and isolating experiences, and academic self-efficacy. Additionally, the use of specific
school policies may be more frequently used at specific academic levels leading to different relationships at different academic levels. Finally, students’ ability to internalize and interpret the use of punitive and isolating school policies may differ between students at different academic levels because of developmental differences. For example, older students may be more likely to have the cognitive abilities to abstractly think or interpret the meaning of school policies. It is, however, unclear how differences in development may impact the relationship between punitive and isolating school policies and academic self-efficacy.
Chapter Two

Literature Review

This chapter will provide an in-depth review of the relevant literature. The review will first address the theoretical framework of the study by reviewing Social Cognitive Theory. Next, the school to prison pipeline will be reviewed, with a specific focus on expulsions, suspensions, grade retention, and restrictive special education placement. A brief discussion of the achievement gap between white and black students will also be provided. This chapter will conclude with a summary of the literature review, which will pull together the main points within the review and discuss missing elements from the current literature. Academic level (elementary, middle, and high school) is briefly discussed throughout this chapter; however, the literature on the impact of academic level is sparse and thus cannot be discussed in depth.

Social Cognitive Theory

Social Learning theory was first introduced by Albert Bandura (1977), who believed that observational learning accounted for the majority of human behaviors. Bandura’s early work demonstrated that the act of observing a model emitting aggressive behaviors resulted in imitation of the behavior by the observing individual. Although social learning theory was initially in opposition to radical behaviorism, Bandura introduced the concepts of reciprocal determinism, which bridged the fields of behavioral and cognitive psychology, expanding on Skinner’s (1938) three-part contingency of operant conditioning to include the triadic-reciprocity among behavior, environment, and personal factors. This new theory came to be known as Social Cognitive theory.

**Self-efficacy and sources of influence.** The concept of self-efficacy was introduced by Bandura to explain how a person’s own belief about his/her ability to perform a task influences
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their actual performance. This concept relates to reciprocal determinism because it is one of the personal factors that mediate how an individual interprets his/her own behaviors and environmental variables. An individual’s self-efficacy is formed through the contributions of four sources of influence including, experience, vicarious experiences, social persuasion, and physiological factors. Experiences have the strongest impact on self-efficacy. Experiences of success and failure raise or lower, respectively, an individual’s levels of self-efficacy (Bandura, 1994).

An individual’s self-efficacy can also be influenced by learning through vicarious experiences, or in other words, by observing a model experience success or failure. The influence of the vicarious experience is mediated by how similar the observing individual believes they are to the model. For example, a student may internalize a peer’s failure to a greater degree if the two students share similarities, such as race or cultural background (Bandura, 1994). Although the effects of vicarious learning were initially intended to discuss individuals in the child’s direct environment, the influence of television and internet has allowed students to learn from symbolic models (Bandura, 2004).

Social persuasions can also affect an individual’s self-perception. Social persuasions refer to being encouraged and discouraged by another’s words. For example, being told “You have been playing great this season” by a respected coach could increase an individual’s self-efficacy. Unfortunately, it seems as though individuals’ self-efficacy is more easily damaged through persuasion than enhanced (Bandura, 1997). This is because being verbally criticized seems to carry more weight than compliments (Bandura, 1997). Finally, physiological factors can affect an individual’s level of self-efficacy. For example, the individual may interpret anxiety or somatic stomach pains, as a deficit in skill, thus resulting in lower levels of self-
efficacy. Interestingly, research has demonstrated that black students report higher levels of physiological arousals when compared to their white counterparts (Usher & Pajares, 2006a). Additionally, White students’ academic self-efficacy is predicted by all four sources of influence (actual experience, vicarious, social persuasion, and physiological) compared to black students whose self-efficacy is only predicted by mastery and persuasion experiences (Usher & Pajares, 2006b).

**Goal orientation.** Goal orientation is mediated by an individual’s self-efficacy. Goal orientation was first discussed within the work of Dweck and her colleagues (e.g., Diener & Dweck, 1978, 1980; Dweck, 1986) as being expressed in one of two ways; learning goal orientation and performance goal orientation (Dweck, 1999). Learning goals relate to the belief that one can change his/her ability, while performance goal orientation is associated with the expectation that abilities are fixed. Recently, performance goal orientation has been divided into proving and avoidance goal orientation (VandeWalle, 2001). Individuals who possess a proving goal orientation aim to show competence, while individuals with avoidance goal orientation aim to avoid experiencing failure.

**Attribution theory.** How an individual sets goals is described by goal orientation theory; however, how an individual understands an outcome is discussed in terms of attribution theory. Attribution theory was first introduced by Heider (1958), but Weiner and colleagues are responsible for its current form (Jones et al, 1972; Weiner, 1974, 1986). Attribution theory describes how an individual perceives and explains a success or failure through three domains: locus of causality, stability, and controllability (Weiner, 1984; 1985). Locus of causality describes the source responsible for the outcomes. The source of the outcome can be within the individual (i.e., the individual’s skill or knowledge is responsible for
Stability describes the likelihood of the outcome changing in subsequent trials. A stable attribution would suggest that the individual believes the outcome is likely not to change in the future (i.e., “my score on the exam will be the same despite how much I study”). An unstable attribution suggests that the outcome will likely change in the future (i.e., “the teacher next year is much harder, I will not be able to do as well”). Controllability refers to the individual’s belief that they are able to alter future outcomes or that the outcome is beyond their ability to control (i.e., “if I study harder I will pass the next test” vs. “I will fail the next test no matter how hard I try”). The controllability domain can be replaced by an alternative domain known as globality/specificity. Although similar to stability, which addresses the likelihood of change over time, globality/specificity refers to the belief that the outcome will occur across different settings (globality) or will only apply to the single setting (specificity).

An individual will typically have attributions for each domain. For example, a student who states “I failed the exam because I am dumb and no matter how much I studied I would have never be able to pass” has an internal, stable, uncontrollable attribution. If that student had instead said “I failed the exam because my teacher is bad, I cannot learn from her,” this student will be demonstrating an external, stable, uncontrollable attribution. In both of these examples the student is only discussing one exam, thus it is specific. If the student were to have said “I failed the exam because I am dumb, I probably will fail at my new job for the same reason,” he would be demonstrating a global attribution. Although students will have some variability in their attributions, often individuals will develop an attribution scheme that is more representative of their typical thinking patterns. Students who develop internal, stable, and uncontrollable or global attributions for failures are more likely to exhibit avoidant academic behaviors and
develop learned helplessness (Abramson, Seligman, & Teasdale, 1978; Covington, 1984; Seifert, 2004).

**Learned helplessness.** Learned helplessness refers to the expectation that an individual developed through past experiences the idea that despite any level of effort, an outcome will result in failure. This concept was first identified by Seligman and Maier (1967), who accidentally caused a group of dogs to exhibit symptoms similar to depression as a result of being electrically shocked. Specifically, this group of dogs had been exposed to electric shocks that they were unable to prevent or stop. When these dogs were exposed to electric shocks a second time, but were given an opportunity to escape, they did not attempt to escape but instead laid down and cried. Other groups of dogs that were not exposed to the same initial conditions did not demonstrate these behaviors and simply escaped from the shocks (Seligman & Maier, 1967).

Although learned helplessness results from interactions with the environment, there are some cognitive processes that mediate the development of learned helplessness; specifically an individual’s goal orientation and attribution scheme can significantly affect the likelihood of becoming helpless. For example, individuals who possess a performance goal orientation are more likely to attribute ability to failures instead of effort. These individuals are likely to view failures as internal, stable, and global, leading to future helplessness (Heyman & Dweck, 1992). Interestingly, people can also develop learned helplessness through vicarious learning. For example, a younger sibling may develop learned helplessness from observing an older sibling’s failure (DeVellis, DeVellis, & McCauley, 1978). Thus, the effects of social learning theory are seen in the development of learned helplessness.

In conclusion, Social Cognitive Theory helped link cognitive and behavioral theory by looking at the interaction between environmental and individual factors. Self-efficacy was
introduced to explain how an individual’s belief about their ability to perform a task influences their actual performance on the task. Self-efficacy functions as a mediating factor influencing motivation, goal setting, and a variety of other variables associated with becoming successful at a specific task. Of specific relevance to the present study is the impact of actual experiences on the development of self-efficacy. A person’s actual experience of success or failure is the strongest influence on the formation of self-efficacy. Thus, to understand how a student’s academic self-efficacy is formed it is important to look at the students experiences of success and failure in school. One possible experience that may impact a student’s self-efficacy is exposure to punitive and isolating school policies.

**School to Prison Pipeline**

The school to prison pipeline describes a collection of educational and school related variables that are hypothesized to contribute to the over-representation of minority males within the prison system. The variables that define the school to prison pipeline include: disciplinary policies, such as the use of expulsions and suspensions; gate keeping polices, such as grade retention, and the use of restrictive and isolating special education or alternative education programs. Students who are at greatest risk - black students and/or students who qualify for special education services - are disproportionately exposed to these policies (Johnson, Boyden, & Pittz, 2001). For those students who are most frequently targeted, these variables combine to make the educational experience increasingly punitive and isolating as they progress through school, putting them on a trajectory towards future incarceration (Wald & Losen, 2003).

Punitive and isolating experiences are theoretical constructs describing a group of policy driven decisions that often remove students from their peer cohort in an attempt to manage behavioral and/or academic difficulties. These policies are often implemented in a reactionary
manner as a consequence to a student’s failure or inability to behave or meet an expected or
desired criterion. Policies, such as suspension and expulsion, are implemented with the intent of
being punitive while simultaneously segregating students from their peer group and removing
them from their educational setting. Grade retention and restrictive special educational placement
are often conceptualized as being supportive and typically are used with the belief that students
will benefit from them. Unfortunately, these approaches isolate students by removing them from
their peer group and general education setting. Students may perceive grade retention and
placement into special education as punitive because these approaches are typically implemented
after a student experiences prolonged or continuous academic or social failure.

**Disproportionality of discipline.** There is a very similar over-representation of black
men within our prison system that seems to mirror our schools’ disciplinary rates (Wald &
Losen, 2003). In fact, 32 percent of students who are suspended from school are black (Raffaele,
Mendez, & Knoff, 2003). Similarly, approximately 41 percent prison inmates are black men
(Harrison & Beck, 2005; Robinson-Wood, 2009). Many researchers and sociologists argue that
this similarity is likely not a coincidence but instead is the result of the same racial
discrimination and profile that is seen across American culture (Meiners, 2007). Despite Horace
Mann’s idealistic view of education as being “the great equalizer of the conditions of man, the
balance-wheel of social machinery” (Mann, 1960, p. 87), the education experience seems to
perpetuate culturally-based discrimination and reinforce the unfair conditions within the social
machinery. As a result, there is more than a three to one ratio of black individuals in prison
compared to the rate of those in college (U.S. Census Bureau, 2007).

The disciplinary procedures that are used with adults and students are surprisingly
similar. Frequently, children who break school rules are excluded or ostracized for their behavior
through suspensions and expulsions in a similar manner to how adults are removed from society through incarceration. These practices in schools frequently are utilized to ensure the safety of the school by removing the problematic child from the environment; however, schools often ignore the effects that this may have on the child being penalized. Punitive and isolating policies farther marginalize our schools most disenfranchised individuals, often pushing them out of school all together. School personnel often appear to be more focused on behavioral control than educating and enriching students (Noguera, 2003). As a result of the current use of punitive procedures, schools have become micro versions of the criminal justice system, targeting racially and economically similar individuals to those who are imprisoned as adults (Singer, 1996).

**Zero tolerance policies.** Many researchers cite the integration of zero tolerance policies into school as one of the main contributing factors of creating the school to prison pipeline. The concept of zero tolerance was developed in 1986 as a way to handle drug trafficking. It was intended to reduce offenses by treating all offenders equally despite the severity of the violation. The hypothesized rationale is that the severe sentences would send a message that any offense is intolerable (Skiba, 2000).

Through the last few decades, the influence of zero tolerance policies spread into American schools and judicial system. As a result, schools have experienced a significant increase in the use of suspensions and expulsions (Skiba, 2000) and an increase use of law enforcement as a result of illegal behaviors in schools (Singer, 1996). Additionally, in response to zero tolerance policies, a vast majority of states passed laws that allowed juvenile offenders to be tried as adults. Zero tolerance policies also unfairly targeted and further marginalized our country’s minority youth. Currently, black adolescents with no previous criminal record are incarcerated at a rate six times greater than their white counterparts for the same offense. As a
result, two-thirds of the US’s youths correctional system is comprised of black youth, despite the fact that only one-third of the youths in the United States are black (Poe-Yamagata & Jones, 2000; Wald & Losen, 2003).

**Expulsions.** In 2010, the Texas branch of Appleseed, a network of non-profit public justice groups, published a comprehensive article addressing the disproportionate use of expulsions targeting black students in Texas. Specifically, they addressed the use of mandated and discretionary expulsions from public schools and from Disciplinary Alternative Education Programs (DAEPs). This publication warned that the use of expulsion can lead to students dropping out of school. Those who remain in school after being expelled are often introduced to the juvenile justice system as a result of being placed in juvenile justice alternative education Programs. Unfortunately, many students who are expelled for “serious or persistent misconduct”, which, contrary to what its name suggests, refers to behaviors that are less severe and typically result in discretionary expulsions, wind up in programs with peers with significantly more delinquent behaviors (Texas Appleseed, 2010). This exposure to more severe delinquent behavior is problematic because studies have shown that both children and adults, who are at low risk of recidivism of criminal behavior, increase their likelihoods of re-offending if they are placed in programs with more severe offenders (Leschied & Gendreau, 1994; Dodge, Dishion, Lansford, & Society for Research in Child, 2006).

In Texas, black students are over-represented in all discretionary expulsions. For non-violent offenses, which are viewed as more subjective, black students are over-represented by over double what their normative population would suggest and are at three times the risk of being expelled compared to other students. Interestingly, black students were not over-represented in mandatory expulsions. Mandatory expulsions are more clearly defined and tend to
be for more objectively observable behaviors. Students who receive special education services are over-represented in every category of expulsions. This over-representation is particularly problematic considering that expulsions result in more detrimental outcomes for students who are in special education such as increased negative behaviors and losses in academic gains (Texas Appleseed, 2010).

Some researchers have suggested that some schools may use expulsions as a method of pushing out under-achieving or needy students by encouraging them not to return to school (Noguera, 2003). This approach seems to target black students most significantly; disciplinary actions are the cause of more dropouts for black students than any other race (Steams & Glennie, 2006). Those students, who are both black and receive special education services are, without a surprise, at the greatest risk of being expelled. Students who are in special education and are black are two times more likely of being expelled than special education students who are not black and three times more likely to be expelled than non-special education students (Krezmien et al., 2006). This increased risk of expulsions put both students and the schools at risk, as a whole. There is very little published research on the relationship between expulsion and educational level. No conclusive evidence was found in the present literature search.

Suspensions. Black students are also over-represented in school suspensions. Compared to their white peers, black students are 2.6 times more likely to be suspended from school (Wald & Losen, 2003). Black students account for 17% of students in the United States, yet 32% of the suspensions were given to black students (Raffaele, Mendez, & Knoff, 2003). No research was identified that distinguished how education level and the use or impact of suspensions relate.

Over the past thirty years, the number of suspensions given to students has been on the rise. Many researchers have attributed this rise to the implementation of zero tolerance policies
in the American school system (Skiba & Peterson, 2000). Although an increase in the number of suspensions has been seen in both white and black students, black students have disproportionately been subjected to a significantly greater increase; increasing from 3.1% to 5.09% for white students, compared to 6% to 13.2% of black students (U.S. Department of Education, 2000; Wald & Losen, 2003).

The fact that black students are being suspended at higher rates may suggest they are involved in more frequent or more intense problem behaviors; however, the evidence does not support this. In fact, there is no evidence that black students misbehave at a significantly higher rate than their white peers (McCarthy & Hoge, 1987; Wu, Pink, Crain, & Moles, 1982). Black students tend to receive more severe consequences than white students for sometimes less severe offenses (McFadden, Marsh, Price, & Hwang, 1992; Shaw & Braden, 1990).

There are significant qualitative differences between the types of behaviors black and white students get in to trouble for. White students tend to be punished for very concrete and objective behaviors (i.e. vandalism, smoking, endangerment, obscene language, and drugs), while black students tend to be disciplined for behaviors that are more subjective (i.e. loitering, disrespect, excessive noise, threats, and misconduct) (Skiba, Michael, Nardo, & Peterson, 2000). Black students may, in fact, be getting punished as a result of racial biases that lead teachers to perceive these students as more aggressive, threatening, and disrespectful. This racial bias could be connected to the fact that the current population of teachers in American schools is predominately white, middle-class, and female (Gay, 2000). Because of discourses surrounding the perceived danger of black youths, teachers may have a heightened sense of insecurity and thus react more punitively to interactions with black students. Additionally, urban schools in general are comprised of less experienced teachers with heightened levels of teacher attrition.
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(Howard, 2003; Ingersoll, 2001). This fact is particularly relevant because there is a long history of research that suggests that less experienced teachers report classroom discipline and behavioral management as their greatest struggles (Veenman, 1984; Wang, Odell, & Schwille, 2008). Those teachers who are anxious about controlling their classroom may attempt to use discipline more frequently to maintain order and control their classes.

Students who receive services for special education are also disproportionately excluded from the academic setting due to disciplinary action. On average, students who are in need of special education are suspended twice as often as typical students. However, this discrepancy is greatly overshadowed by the over-representation of students with emotional or behavioral disability who are 11 times more likely of being subjected to suspension compared to typically developing students (Christle, Nelson, & Jolivette, 2004).

Outside of the large disparities in the use of suspensions for black and special education students, there are pragmatic problems with the use of suspensions. In the forefront of these problems is the fact that suspensions are, for the most part, ineffective. In order to understand how suspensions function in schools one must understand behavioral theory and operant conditioning.

**Behaviorism and suspension.** Skinner (1938) coined the term operant behavior, which was defined as a behavior that is influenced by the stimuli that follows the behavior, in contrast to a respondent behavior. In other words, the likelihood of a behavior occurring again in the future depends on the consequences to the person who emitted the specific behavior. Skinner explained that the likelihood of a behavior occurring again would either increase or decrease. If there were an increase in the likelihood of a behavior re-occurring, the behavior would have been reinforced. On the contrary, if the likelihood of a behavior were to decrease, than the behavior...
would have been punished. This process of learning is referred to as operant conditioning. Operant conditioning is frequently described as a three-term contingency consisting of an antecedent stimulus, a response (the behavior), and a consequence.

Within behavioral theory, an operant behaviors is viewed as being maintained and reinforced by four fundamental functions. These functions include: attention, escape, access to tangibles, and self-stimulation (Carr, 1994). Thus, an undesirable behavior serves and is reinforced by one or more functions. By understanding the function of a socially maladaptive behavior, functionally relevant consequences can be instated and functional an alternative behavior can be taught. The function of a behavior can be understood by systematically assessing the antecedents and consequences of a behavior. This may allow for insight on the effectiveness of behavioral consequences.

For example, if a student talks to a peer to escape from doing his work, the consequence of being removed from class may accidentally reinforce the behavior instead of punishing it. This relates to the proposed model by possibly explaining why grade retention, special education placement, suspensions, and expulsions may be correlated. A behavior may be accidently reinforced by school policy, such as mandatory suspensions that might lead to increase likelihood of the behavior being emitted again, potentially increasing the likelihood of other punitive or isolating experiences.

If suspensions effectively punished problem behaviors, one would expect the likelihood of a repeat offender to be very low. On the contrary, 40% of suspensions are given to students who have previously been suspended. For many students, being removed from school and the academic setting, works as reinforcement and accidentally teaches students to misbehave (Tobin, Sugai, & Colvin, 1996; Skiba, 2000).
Not only has suspension been shown to increase the likelihood of later suspensions, they have also been connected to a number of negative outcomes. Skiba and Rausch (2004) found that the rate of suspensions in a school negatively predicted that school’s passing rate on the Indiana Statewide Testing for Educational Progress, even after controlling for poverty and race. Additionally, they found that black students had lower rates of passing even after poverty levels were controlled for. Thus, both race and suspension rates contribute to low academic achievement (Skiba & Rausch, 2004). Students who are removed from school as a result of suspension or expulsion also have a higher likelihood of dropping out of school (Gordon et al., 2001). After students are removed from school, they are often left at home without supervision and without structure. This lack of supervision and structure create opportunities for students to get in further trouble. Being removed from school is linked to increase risk of illegal behavior and sexual activities and drug use (Christle et al., 2004; Morrison et al., 2001; Taras et al., 2003).

Schools often do not allow students to make up the work they missed during their suspension (Rossow & Parkinson, 1999). This inability to make up work is detrimental to their achievement and adjustment when returning to school (Christle et al., 2004; Gordon et al., 2001; Skiba & Knesting, 2002). Many students who receive punishments in school feel singled out and picked on by teachers. These feelings exemplify students’ belief that discipline procedures are inconsistent and unfairly distributed (Munn et al. 2000). Students who are removed from school tend to resent and resist school staff and their efforts to teach and manage students (Sekayi, 2001).

Beyond the negative outcomes of school removal on students’ academic achievement, students often interpret school removal as rejection (Skiba, Noam, 2002; Brown, 2007). This perception of rejection is particularly problematic because students’ perceptions of school staffs’
feelings towards them can influence their willingness to engage in school related activities (Nieto, 1999; Perez, 2000; Valenzuela, 1999). No research has linked suspensions and academic self-efficacy. Thus, reported feelings of rejection are the only empirical evidence of how suspensions may impact a student’s beliefs.

**Grade retention.** Grade retention refers to the act of holding a student back or preventing him/her from being promoted to the next grade. This is a common practice in many school districts across the country leading to 9.6 percent of students between the ages of 16 and 19 to have been held back at least one time during their academic career (U.S. Census, 2004). Often students are held back because it is believed that they do not have the academic skills that would be required for them to be successful if promoted (Tomchin & Impara, 1992). Additionally, some students are held back because it may be believed that they do not have the social emotional maturity required to achieve. Grade retention has increased significantly in recent years in part due to the increased use of high stakes testing (Bali, Anagnostopoulos, & Roberts, 2005; Gootman, 2005; Roderick & Nagaoka, 2005). Unfortunately, there may be some substantial fiscal consequences in the use of grade retention. Based on estimates from the National Center for Educational Statistics (1997), if one percent of American students are retained per year, the cost to the public is estimated to be approximately $2.6 billion per year (Eide and Showalter, 2001).

The use of grade retention has shown some positive short-term effects for the retained students’ academic achievement but these effects often do not last. In the year immediately following retention, retained students have been shown to have improved achievement when compared to their younger classmates in the repeated grade (Anderson, Jimerson, & Whipple, 2005; Gleason, Kwok, & Hughes, 2007; Pierson & Connell, 1992). Retained students also
showed increased performance when compared to low-achieving academically matched students who were promoted (Wu, West, & Hughes, 2008a). However, the immediate benefits consistently diminish over the following years and in many cases result in negative long-term effects in academic achievement (Wu, West, & Hughes, 2010; Hong & Yu, 2008; Pierson & Connell, 1992; Wu, West, & Hughes, 2008a; Jacob & Lefgren, 2004; Roderick & Nagaoka, 2005).

Likewise, retention in early grades seems to have immediate positive effect on students’ social emotional functioning but these effects decrease over time. Benefits are seen in association to students’ sense of school belonging and peer rated acceptance immediately following retention in kindergarten but positive effects diminished by grade four (Wu, West, & Hughes, 2010). Within a predominately black urban population, early grade retention resulted in increased academic self-efficacy in fourth grade but these effects were lost by adolescence (Reynolds, 1992, McCoy & Reynolds, 1999). As a result of the changing effects of retention over time, the effects of retention on social emotional development are mixed. For example, some findings suggest that retention results in lower levels of self-esteem and school connectedness, in addition to increased problem behaviors and difficulties related to social adjustment (Jimerson et al., 1997; Jimerson & Ferguson, 2007; Nagin, Pagani, Tremblay, & Vitaro, 2003; Pianta, Tietbohl, & Bennett, 1997; Pagani et al., 2001). Other studies have not demonstrated negative effects on problems behaviors (Gottfredson, Fink, & Graham, 1994) and social-emotional development (Hong & Yu, 2008).

The literature on retention appears to consistently demonstrate that the effects of retention differ depending the grade level, resulting in more negative long term effects for students who are retained in later grades. Pomplum (1988) found that the benefits associated with retention
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decreased when retention occurred during a later grade. Likewise, Jacob and Lefgren (2004) demonstrated that the academic benefits that occur immediately after grade retention in early grades did not occur when retention was used in later grades. Being retained in early grades seems to have little to no predictive power associated with dropping out of school. However, the use of retention in later grades is a strong predictor of school dropout (Jacob and Lefgren, 2004, Ou, and Reynolds, 2008). Additionally, being retained between fourth and eighth grade resulted in a significant decrease in post-secondary school attendance when compared to students retained between first and third grade (Ou and Reynold (2010). Finally, grade retention was associated with lower salary rates (Eide & Showalter, 2001) and less adaptability into mainstream society post high school (Royce, Darlington, & Murray, 1983).

Special education. In 2004, the Individuals with Disabilities Education Act (IDEA) was re-authorized. In its new form, IDEA required states to monitor the disproportionate inclusion of individuals of racial and ethnic minorities in special education placement (Skiba, Simmons, Ritter, Gibb, Rausch, Cuadrado, & Chung, 2008). According to data released by the National Research Council (NRC), African American students are over-represented in special education. This over-representation is especially true in students diagnosed as having intellectual disabilities, emotional disturbance, and multiple disabilities. Black students are 2.88 and 1.98 times more likely to be in special education for intellectual disabilities and emotional disturbance, respectively, than their white peers.

Black students are not only more likely to be placed into special education, they are also more likely to be taught in environments that are more restrictive. Thirty-seven percent of black students, compared to 55% of white students, who are involved in special education, are taught in an inclusion program. Likewise, 33% of black students, compared to 16% of white students
who are in special education are taught in substantially separate classrooms (Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). Thus, qualifying for special education may be more punitive and isolating for black students than white students.

The over-representation of black students in special education creates specific risks that could contribute to increased feelings of learned helplessness and subsequent academic failure. Students who qualify for special education, as a result of learning disabilities, tend to experience continued academic failure, which is implied by the diagnosis. These students are thus at increased risk for developing learned helplessness (Cullen, 1985). Students with learning disabilities tend to view their failures as uncontrollable, attributing their difficulties to low levels of intellect, difficulty of the task, and teacher bias (Cullen, 1985).

Students with learning disabilities are not only isolated through being educated in restrictive settings but they are also socially isolated. Students with learning disabilities perceived themselves as having lower levels of self-worth and believe that they are less skilled in social situations. Also, these students are subjected to peer rejection. Students with learning disabilities, who are having academic difficulties, are less socially preferred by peers than non-disabled students, who also are having academic difficulties. Peers are less likely to be interested in playing with the students who have a learning disability leading to greater levels of social isolation (La Greca & Stone, 1990).

Failing students, both with and without learning disabilities, report lower levels of academic goals, deficits in self-esteem, higher levels of depression, and attribution patterns that are associated with unfavorable outcomes. Although negative outcomes are seen in all failing students, being diagnosed with a learning disability does have additional negative outcomes beyond that which can be explained by their academic difficulties. Students with learning
disabilities show high levels of helplessness and have lower levels of self-esteem. Additionally, being placed in special education may create unfavorable bias from peers and teachers. These biases may result in low expectations and increased levels of perceived helplessness (Valaês, 2001).

**Academic Self-Efficacy**

Across varying ages, self-efficacy has been shown to be directly correlated with students’ motivation during learning tasks (Schunk, 1995) and with academic achievement across a myriad of subjects (Lent, Brown, & Larkin, 1986; Multon, Brown, & Lent, 1991; Pajares, 1996; Schunk, 1995; Schunk & Meece, 2005). Collins (1982) demonstrated that, within mathematics, students’ self-efficacy predicted academic achievement even after controlling for abilities within mathematics. Additionally, self-efficacy can indirectly influence achievement by dictating a student’s behavior during academic tasks. Students with greater self-efficacy manage their academic time more effectively (Zimmerman, 2000), show more persistence and self-regulation, monitor academic achievement more frequently (Schunk & Pajares, 2002) and are less likely to participate in delinquent behaviors (Chung & Elias, 1996).

Unfortunately, research on differential levels of academic self-efficacy between white and black students has been inconclusive. As a result of variations of empirical methodologies and the influence of compounding variables, the literature is unclear about whether black students truly possess lower academic self-efficacy (Schunk & Meece, 2005). For example, Britner and Pajares (2001) and Roeser, Midgley, and Urdan (1996) found no differences between black and white students’ science and general academic self-efficacy, respectively, while Pajares and Kranzler (1995) demonstrated lower levels of self-efficacy in mathematics for black
students. No clear empirical evidence was found on differences between black and white students’ self-efficacy in reading or writing.

Although no clear evidence exists that there is a discrepancy between black and white students’ self-efficacy, there is still a high likelihood that self-efficacy contributes to the achievement gap. Black males are frequently portrayed as less academically competent than their white male counterparts by the mainstream US culture (Meece, & Scantlebury, 2006). These cultural messages may lower levels of self-efficacy caused by racial stereotype threats, which can mediate performance. For example, Steele and Aronson (1995) demonstrated that self-efficacy, based on race, can result in detrimental outcomes for black students on exams. Black students performed worse on a test when they were told the test was going to measure their intelligence compared to when they believed the test was just looking at their general abilities. The study also showed that black students performed worse when test takers were asked to indicate their race at the start of the exam. White students performed identically across all conditions. In the Steele and Aronson study, racial stereotypes were primed in the black test takers by the emphasis of intelligence and race. This priming exacerbated cultural stereotypes about intellect and was detrimental to the black student’s self-efficacy, resulting in greater levels of anxiety and diminished scores. Race-based beliefs like these can result in black students having low academic self-efficacy. When black students have lower levels of academic self-efficacy they may believe that they are incapable of academic success and develop feelings of helplessness. This cognitive chain of events may contribute to the academic achievement gap by lowering students’ expectation of their own abilities.
The Achievement Gap

The academic achievement gap refers to the discrepancy in academic achievement between white and black students. When national data are analyzed, black students experience lower levels of academic achievement compared to their white peers. This gap exists across all academic domains (i.e., reading and math); however, levels of reading achievement are often viewed as the most crucial because of how pervasive reading achievement is in students’ overall achievement.

Eurocentrism in schools. In addition to the low levels of achievement seen in black students, the over-representation of black students in special education has significant links to cultural inequalities and what teachers and our schools value. Those students who embody behaviors, attitudes and values that differ from the mainstream culture are often viewed as having deficits instead of differences (Wlodkowski & Ginsberg, 1995). The discrepancies that exist between students’ school and family cultural norms can be misinterpreted as low intellect or as a disability (Heward & Cavanaugh, 1993).

The behavioral expectations that have been applied to the American educational system are derivatives of the dominant culture and often have a significant impact on how student behavior is interpreted. Diagnostic criteria for attention and behavioral disorders may more closely resemble the natural behavior of people within the black community. The presentation of high-energy motor movement and emotional communication may be an expression of cultural norms instead of innate deficits (Gay, 2000). Students of color, who are also diagnosed with a disability, obtain an additional risk that accompanies the possession of a label. In addition to any stigmatization that occurs because of being a racial minority, students who also have a label of a
disability are at an additional risk of being subjected to negative perceptions of their abilities and behavior by their teachers (Foster, Schmidt, & Sabatino, 1976).

Teachers seldom are prepared to teach students who do not fit the Eurocentric expectations of the school setting. In reaction to their own inability to teach these students, teachers may instead view the students as unable to learn (Comfort, 1992). This reaction infuses the school setting with a “blame the victim” mentality. Students are blamed for their inability to learn, but, in reality, are victims of ineffective teachers.

**Student and family risk factors.** One explanation for this gap could be the number of risk factors that black students are exposed to during their academic career. According to an analysis of the Early Childhood Longitudinal Study (ECLS) by Zill and West (2001), 27 percent of black students have two or more family risk factors for low reading achievement. These factors include low maternal education, welfare dependency or poverty status, having one parent at home, and having non-native English speaking parents. This 27 percent of black students compares to only six percent of white students. Students (black and white) who had two or more of these risk factors scored an average of 18 scaled score points lower on the ECLS third grade reading assessment than students who had no risk factors.

Although family risk factors significantly contribute to the low reading levels of black students, the achievement gap in reading continues to exist even after these factors are controlled. In first grade, black students had a 0.51 standard deviation deficit in reading performance. This deficit continued to exist even after entry-level reading skills are controlled. This suggests that black students made fewer gains during the year than other ethnic groups (Chatterji, 2006). Likewise, data from the National Assessment of Educational Progress (NAEP) suggest that the achievement gap continues to be present even after controlling for
socioeconomic levels, suggesting that the achievement gap is not purely a derivative of economic factors (Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009).

**Educational trajectories.** On January 8, 2002 federal legislation targeting education reform, the No Child Left Behind Act of 2001 (NCLB), was signed into law. Defined within NCLB was the requirement that schools close achievement gaps by 2014. This requirement forces districts to increase supports for groups of students who traditionally are under-served.

Despite this NCLB’s focus on the achievement gap, there have only been small changes in students’ educational trajectories. Vanneman, Hamilton, Baldwin Anderson, and Rahman (2009) analysis of the NAEP found that in 2004 the reading scores of nine-year-old students, both black and white, increased to their highest level. Because both groups increased similarly, the achievement gap between the two groups of students was not significantly different than it was during the 1980’s. However, the gap did narrow for 13-year-old students. This shrinking of the gap was the result of increased scores by black students while white students’ scores remained stable. When assessing the achievement gap by grade, both black and white students had improved scores compared to previous years; however, the scores of black students were greater resulting in an overall shrinking of the gap. The gap narrowed in all grades except for eighth graders. This narrowing of the gap is encouraging; however, the amount of change that has occurred thus far suggests that, if the current trends were to continue, the achievement gap would continue well past 2014.

**Summary**

Research has shown that high levels of academic self-efficacy are linked to greater academic achievement and to behaviors associated with greater achievement. There is currently no conclusive evidence that black students experience lower levels of academic self-efficacy;
however, studies have shown that when race is emphasized in academic tasks, black students’ achievement is negatively impacted. This negative impact suggests that academic self-efficacy can be influenced by a student’s race.

The literature for the school to prison pipeline has suggested that black students may be exposed to punitive and isolating experiences at a higher rate than other groups of students. Researchers point to the zero tolerance policies and the underlining racial cultural biases to explain the disproportionate rates of disciplinary actions taken against black students. Likewise, it identifies several specific policies that could be contributing to the achievement gap and over-representation of black men in the criminal justice system. The policies include the use of expulsions, suspensions, grade retention, and restrictive special education placement.

Black students are over-represented in the use of expulsions, suspensions, and grade retention. Black students also qualify for special education services at a higher rate than their white peers, and black students who qualify are less likely to be taught in inclusion program and more likely be placed in substantially separate or alternative placements. Both expulsions and suspensions have been associated with negative academic and behavioral outcomes. Expulsions increase the probability of students dropping out of school and being involved in the juvenile justice system. Additionally, suspensions often appear to negatively reinforce problem behaviors instead punishing them, making it more likely for students to be suspended in the future.

Current research on the impact of grade retention academic and social-emotional outcomes is inconclusive; additional research with greater control of confounding variables is needed to fully understand the impact of grade retention. Despite inconclusive findings, researchers do agree that the negative impact of grade retention is greater when students are retained in later grades. Finally, students that qualify for special education experience negative
teacher bias, peer rejections, lower levels of self-esteem, and increased levels of hopelessness. Thus, expulsions, suspensions, grade retention, and restrictive special education placement can be conceptualized as punitive and isolating and each have the potential of putting students at risk of negative outcomes.

Despite the amount of research that has been conducted on each of these policies, the current literature does not clearly identify how each of these policies relates to academic self-efficacy. In the present study it is hypothesized that expulsion, suspension, grade retention, and more restrictive educational placement will be negatively related to academic self-efficacy across all three academic levels. The literature suggests that these policies simultaneously impact students and that they cause the educational experience to become punitive and isolating; however, no studies have determined if these variables contribute or are part of a cohesive model. Additionally, no research has looked at the impact of each of these policies at different educational levels and across black and white students. Finally, no studies have investigated the impact of each policy while controlling for the shared variance of the other policies.

Much of the school psychology literature that attempts to explain punitive and isolating experiences is not grounded in or unified by a fundamental theory. As a result no unified models have been investigated in an attempt to study punitive and isolating experiences. In addition, past studies have not utilized methodologies that would allow the investigators to test the degree to which a theoretically-based model fits what is actually occurring in schools. Thus, it is unclear if punitive and isolating experiences can be constructed into a single model and, if so, would this model be supported by a Structural Equation Model. Likewise, it is unclear if grade retention, special education placement, suspensions, and expulsions cause school to become punitive and isolating and, if so, can these experiences be used to explain the disproportionality of black
males in our prison system. This is because no model has been tested to compare the impact of these experiences across racial groups. Finally, it is unclear how grade retention, special education placement, suspensions, and expulsions contribute to the punitive and isolating experiences and students’ academic self-efficacy over time.

The field of school psychology often attempts to improve and inform school policy through the use of empirical studies. Unfortunately, the school psychology literature on the variables that account for punitive and isolating experiences is inconclusive, inconsistent, and/or not universally utilized in the creation and implementation of school policies. In order for the field of school psychology to effectively inform policies the literature needs to expand to include theory driven, simultaneous investigations of punitive and isolating experiences.
Chapter Three

Methods

In this chapter, the methods of testing the hypothesized model regarding the impact of punitive and isolating experiences will be addressed. Specifically, this study examined the relationship between school policies and students’ academic self-efficacy, the relationship between students’ race and the use of punitive and isolating school policies, and how educational level corresponds with the level of influence each policy has on self-efficacy. This study used data from the Special Education Elementary Longitudinal Study (SEELS), which is a non-experimental, exploratory investigation of a nationally representative sample of students who received special education services. SEELS investigated the variables that influence the outcome of special education students. A description of SEELS will be presented including a description of the sampling procedures, participants, data collections methods, and specific assessment instruments used to collect the data. This chapter will also identify the specific procedures that were used to analyze the data, including: selecting and formatting of variables, analysis of the fit of the model, and analysis of the strength of the relationship between the variables within the model.

Special Education Elementary Longitudinal Study (SEELS)

SEELS was commissioned by the Office of Special Education Programs (OSEP), which is part of the U.S. Department of Education. Specifically, SEELS was designed by SRI International and the Research Triangle Institute to investigate a large, nationally representative sample of students who receive special education services. The major goal of SEELS was to provide nationally representative information on what variables influence the outcomes of special education students. The sample was stratified to be representative of each disability
category, as specified by 1997 Individuals with Disabilities Education Act (IDEA97) within each single-year age cohort. The initial sample included four single year age cohorts ranging from ages eight to twelve. SEELS’ researchers followed students as they progressed through school while collecting data on student and family characteristics, school characteristics/policies/programs, and non-school related information, utilizing direct assessments, interviews, and surveys. Data collection lasted for six years spanning from 2000 to 2006.

Data collection procedure. SEELS data were collected in three waves across a five year time frame. Wave one and two data collection procedures are provided below. They are quoted directly from the most recent documentation provided by the SEELS (SEELS, 2005). No procedures describing wave three are currently available. Additionally, information about year one of the study is absent from current SEELS documentation. SRI’s (1999) Revised Timeline and Data Collection, Sample, and Analysis Plans indicated that parent interviews were intended to be conducted in year one; however, current design descriptions seems to indicate that this plan was not achieved and was instead conducted in years two and three.

“In waves 1 and 2 (years 2 and 3), parents or legal guardians have been interviewed by telephone to measure student and household characteristics, nonschool factors, and some student outcomes, including family satisfaction with educational programs. In addition, data were collected during waves 1 and 2 (years 2 and 3) from teachers that served the students, school staff who could report on students’ overall school programs, and principals of schools attended by SEELS students. This information focused on describing students’ schools and school programs and their educational and other outcomes. Finally, data was collected during waves 1 and 2 (years 2 and 3) on students’
academic and social adjustment outcomes. Students were assessed directly by on-site staff using standardized measures of academic achievement, student self-concept, and attitudes toward school.”

**Sampling.** The SEELS used a two phase sampling process. First, researchers randomly sampled students from a nationally representative sample of Local Education Agencies (LEA) and state supported special schools for the deaf and blind. LEAs were stratified by geographic region, district enrollment, and district/community economic status. In order to have a sufficient sample size, 297 LEAs were included. LEAs were selected from the Quality Education Data (QED, 1998), which is a commercial data source of districts. Errors such as duplicated names were corrected, resulting in a master list of 13,426 LEAs that were believed to have at least one student within the desired age range in special education. This master list functioned at the SEELS sampling frame. All LEAs were portioned within a 64-strata grid, which was created by the sub-categories of the three stratifying variables. From the total sample, 765 LEAs were systematically selected to maximize the sampling efficiency. SEELS data were collected in three waves across a five year time frame.

Second, weighting procedures were used to match the distribution of LEAs over the 64-strata grid. The sample size was determined based on the duration of the study, desired levels of precision and predicted rates of attrition and response rates. The first wave of data was collected on students between the age of six and 12 years old. Students must have been in at least first grade by December first, 1999. Wave one included 11,512 students from 245 LEAs and across 35 state-supported special education schools. The study aimed to have 1,150 students within each of the 13 federal disability categories except for deaf-blind and traumatic brain injuries which only included 200 and 375 students respectively. These two categories of disabilities
represent a small amount of the studies sample because of the low prevalence of these disabilities.

Table 1 provides the un-weighted sample size of each of the SEELS data files being used for each of the three waves. Each wave represents a specific period of time that data was collected during. Each wave occurred in order between 2000 and 2006. The present study examined male students who are either black or white. Additionally, not all grades were included. Thus not all of the students represented in Table 1 are included in the present study. For a detailed description of the sample size and demographics of the students included in the present study for each wave see Table 2.

<table>
<thead>
<tr>
<th>Data File</th>
<th>Wave One</th>
<th>Wave Two</th>
<th>Wave Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Assessment</td>
<td>3,912</td>
<td>5,216</td>
<td>4,867</td>
</tr>
<tr>
<td>Parent Interview</td>
<td>9,747</td>
<td>7,126</td>
<td>6,337</td>
</tr>
<tr>
<td>School Program</td>
<td>6,206</td>
<td>5,794</td>
<td>6,468</td>
</tr>
</tbody>
</table>

Weights. The SEELS database utilizes sample weights to produce population estimates and allow the sample to represent the universe of their sampling strata. Within the SEELS data, sample sizes of each instrument and wave differ. For this reason, there is an individual weight for each instrument within each wave. The SEELS did not use weights to adjust for oversampling of underrepresented groups in the population.

Measures. The SEELS used a variety of assessment instruments to collect data. Specifically, the present study used data from three sources: Parent interview, Survey of school program, and direct assessment. Measures of suspension, expulsion, and grade retention were all collected via parent interview. Specifically, these questions were found within Section D – School Experiences and were each scored categorically. Table 3 provides descriptive statistics.
for wave one, two, and three. Table 4 provides variable name, description, source, and data scale.

Table 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Wave One</th>
<th>Wave Two</th>
<th>Wave Three</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Un-Weighted</td>
<td>Weighted</td>
<td>Un-Weighted</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>2,282</td>
<td>568,981</td>
<td>1,953</td>
</tr>
<tr>
<td></td>
<td>(76.8%)</td>
<td>(78.2%)</td>
<td>(75.6%)</td>
</tr>
<tr>
<td>Black</td>
<td>690</td>
<td>158,386</td>
<td>630</td>
</tr>
<tr>
<td></td>
<td>(23.2%)</td>
<td>(21.8%)</td>
<td>(24.4%)</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>889</td>
<td>214107</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>997</td>
<td>233534</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>1086</td>
<td>279726</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>-</td>
<td>907</td>
</tr>
<tr>
<td>7</td>
<td>-</td>
<td>-</td>
<td>955</td>
</tr>
<tr>
<td>8</td>
<td>-</td>
<td>-</td>
<td>721</td>
</tr>
<tr>
<td>9</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Urbanicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>304</td>
<td>154687</td>
<td>283</td>
</tr>
<tr>
<td>Sub</td>
<td>1470</td>
<td>376365</td>
<td>1353</td>
</tr>
<tr>
<td>Urban</td>
<td>1105</td>
<td>193836</td>
<td>928</td>
</tr>
</tbody>
</table>

The percent of classes taught in the general education setting is a variable created by the SEELS. Although this measure indicates the amount of time that students are included in the general education setting, it also provides information about the amount of time each student was isolated in a less inclusive program/classroom. The inverse of this score specifically indicates how the percent of classes that are taught in a special education setting, thus a greater level of isolation. It uses variables that were found in the Student’s School Program Survey. This variable was created by dividing the number of general education classes by the summation of the
number of general education classes, resource room classes, special education class, home bound classes, and community setting classes. Finally, a percentage was calculated by multiplying the resulting quotient by 100.

Table 3

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Wave One</th>
<th>Wave Two</th>
<th>Wave Three</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>Sd</td>
</tr>
<tr>
<td>W1 Ever Retained</td>
<td>719995</td>
<td>.2767</td>
<td>.44735</td>
</tr>
<tr>
<td>W1 Retained 2nd</td>
<td>199756</td>
<td>.2265</td>
<td>.41858</td>
</tr>
<tr>
<td>W1 Retained 3rd</td>
<td>199756</td>
<td>.0518</td>
<td>.22171</td>
</tr>
<tr>
<td>W1 Retained 4th</td>
<td>199756</td>
<td>.0549</td>
<td>.22786</td>
</tr>
<tr>
<td>W1 Suspended</td>
<td>717380</td>
<td>.0478</td>
<td>.21332</td>
</tr>
<tr>
<td>W1 Expelled</td>
<td>721292</td>
<td>.0017</td>
<td>.04108</td>
</tr>
<tr>
<td>W1 %General Ed</td>
<td>514972</td>
<td>76.6567</td>
<td>25.40784</td>
</tr>
<tr>
<td>W1 ASE</td>
<td>603820</td>
<td>13.1501</td>
<td>1.88429</td>
</tr>
</tbody>
</table>

Academic Self-Efficacy (ASE) is measured by the SEELS created variable, academic self-concept (ASC). Although ASE and academic self-concept have been defined differently in some psychology literature (i.e. Bong & Skaalvik, 2003), the use of this variable to represent ASE has been supported by the authors of SEELS (personal communication, Mary Wagner,
2011). ASC is derived from items in the self-concept domain of the student direct assessment.

The self-concept domain was adapted from the

<table>
<thead>
<tr>
<th>Variable</th>
<th>Label</th>
<th>Source</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>Retained 2\textsuperscript{nd} If child ever held back, child held back in 2nd grade</td>
<td>SEELS_Interv w_w1</td>
<td>0= No 1= Yes</td>
</tr>
<tr>
<td>W1</td>
<td>Retained 3\textsuperscript{rd} If child ever held back, child held back in 3rd grade</td>
<td>SEELS_Interv w_w1</td>
<td></td>
</tr>
<tr>
<td>W1</td>
<td>Retained 4\textsuperscript{th} If child ever held back, child held back in 4\textsuperscript{th} grade</td>
<td>SEELS_Interv w_w1</td>
<td></td>
</tr>
<tr>
<td>W2</td>
<td>Retained 6\textsuperscript{th} If child held back a grade [in the past 2 years/ever], grade level child held back: 6th grade</td>
<td>SEELS_Interv w_w2</td>
<td></td>
</tr>
<tr>
<td>W2</td>
<td>Retained 7\textsuperscript{th} If child held back a grade [in the past 2 years/ever], grade level child held back: 7th grade</td>
<td>SEELS_Interv w_w2</td>
<td></td>
</tr>
<tr>
<td>W2</td>
<td>Retained 8\textsuperscript{th} If child held back a grade [in the past 2 years/ever], grade level child held back: 8th grade</td>
<td>SEELS_Interv w_w2</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>Retained 9\textsuperscript{th} If child was held back a grade [in the past 2 years/ever], grade level held back: 9th grade</td>
<td>SEELS_Interv w_w3</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>Retained 10\textsuperscript{th} If child was held back a grade [in the past 2 years/ever], grade level held back: 10th grade</td>
<td>SEELS_Interv w_w3</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>Retained 11\textsuperscript{th} If child was held back a grade [in the past 2 years/ever], grade level held back: 11th grade</td>
<td>SEELS_Interv w_w3</td>
<td></td>
</tr>
<tr>
<td>W1</td>
<td>Suspended Child was suspended during this school year [1999-2000]</td>
<td>SEELS_Interv w_w1</td>
<td></td>
</tr>
<tr>
<td>W2</td>
<td>Suspended Child was suspended during this school year [2001-02]</td>
<td>SEELS_Interv w_w2</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>Suspended Child was suspended during this school year [2003-04]</td>
<td>SEELS_Interv w_w3</td>
<td></td>
</tr>
<tr>
<td>W1</td>
<td>Expelled Child was expelled during this school year [1999-2000]</td>
<td>SEELS_Interv w_w1</td>
<td></td>
</tr>
<tr>
<td>W2</td>
<td>Expelled Child was expelled during this school year [2001-02]</td>
<td>SEELS_Interv w_w2</td>
<td></td>
</tr>
<tr>
<td>W3</td>
<td>Expelled Child was expelled during this school year [2003-04]</td>
<td>SEELS_Interv w_w3</td>
<td></td>
</tr>
</tbody>
</table>
Table 4

*Items Initially Selected for Further Analyses for Inclusion in the Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Label</th>
<th>Source</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1 %General Ed</td>
<td>Percentage of classes that child takes in a general ed setting (fill . w/ mean sp1GenedPct by disability)</td>
<td>SEELS_Program_w1</td>
<td>Percentage</td>
</tr>
<tr>
<td>W2 %General Ed</td>
<td>Percentage of classes that child takes in a general ed setting (fill . w/ mean sp2GenedPct by disability)</td>
<td>SEELS_Program_w2</td>
<td></td>
</tr>
<tr>
<td>W3 %General Ed</td>
<td>Percentage of classes that child takes in a general ed setting (fill . w/ mean sp2GenedPct by disability)</td>
<td>SEELS_Program_w3</td>
<td></td>
</tr>
<tr>
<td>w1_dis12</td>
<td>Wave 1 By Var: Disability</td>
<td>All Three Wave 1</td>
<td>1= Learning disability 2 =Speech impairment 3= Mental retardation 4= Emotional disturbance 5= Hearing impairment 6= Visual impairment 7= Orthopedic impairment 8= Other health impairment 9= Autism 10= Traumatic brain injury 11= Multiple disabilities 12= Deaf/ blindness</td>
</tr>
<tr>
<td>W2_dis12</td>
<td>Wave 2 By Var: Disability</td>
<td>All Three Wave 2</td>
<td></td>
</tr>
<tr>
<td>W3_dis12</td>
<td>Wave 3 By Var: Disability</td>
<td>All Three Wave 3</td>
<td></td>
</tr>
</tbody>
</table>
Punitive and Isolating School Policies and Academic Self-Efficacy; p.48

Table 4
*Items Initially Selected for Further Analyses for Inclusion in the Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Label</th>
<th>Source</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>w1_eth6</td>
<td>Wave 1 By Var: Ethnicity</td>
<td>All Three Wave 1</td>
<td>1= White</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2= African American</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3= Hispanic</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4= Asian/Pacific Islander</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5= American Indian/Alaska Native</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6= Multi/other</td>
</tr>
<tr>
<td>W2_eth6</td>
<td>Wave 2 By Var: Ethnicity</td>
<td>All Three Wave 2</td>
<td></td>
</tr>
<tr>
<td>W3_eth6</td>
<td>Wave 3 By Var: Ethnicity</td>
<td>All Three Wave 3</td>
<td>1 Male</td>
</tr>
<tr>
<td>w1_gender</td>
<td>Wave 1 By Var: Gender</td>
<td>All Three Wave 3</td>
<td>2 Female</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W2_gender</td>
<td>Wave 2 By Var: Gender</td>
<td>All Three Wave 2</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W3_gender</td>
<td>Wave 3 By Var: Gender</td>
<td>All Three Wave 3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>w1_grade</td>
<td>Student's grade in school year 2000-2001</td>
<td>All Three Wave 1</td>
<td>Numeric</td>
</tr>
<tr>
<td>W2_grade</td>
<td>Student's grade in school year 2001-2002</td>
<td>All Three Wave 2</td>
<td></td>
</tr>
<tr>
<td>W3_grade</td>
<td>Student's grade in school year 2003-2004</td>
<td>All Three Wave 3</td>
<td></td>
</tr>
<tr>
<td>wt_sa1</td>
<td>Weight: Direct Assessment - Wave 1</td>
<td>SEELS_DAssess_w1</td>
<td>NA</td>
</tr>
<tr>
<td>wt_sa2</td>
<td>Weight: Direct Assessment - Wave 2</td>
<td>SEELS_DAssess_w2</td>
<td></td>
</tr>
<tr>
<td>wt_sa3</td>
<td>Weight: Direct Assessment - Wave 3</td>
<td>SEELS_DAssess_w3</td>
<td></td>
</tr>
</tbody>
</table>

Student Self-Concept Scale (SSCS; Gresham et al., 1993) and the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). The ASC variable is derived from the SSCS, a 72 item, norm-referenced self-report scale for children ranging from third grade to twelfth grade. Of the 72 items that comprise the SSCS, 18 measure Academic Self-Concept. SEELS used five of the of the original 18 items used by SSCS to measure ASC. The five items comprising the ASC had the highest factor loadings and were not duplicative. The specific items that were used by the SEELS to measure ASC are copyrighted and thus cannot be provided here (For a list of items please see Wei & Marder, 2012). The items are measured across two domains (Confidence and Importance). Each domain was measured using a three-point Likert-type scale.
consistency and five-month stability estimates for Self-Concept Confidence rating was found to be .80 and .72, respectively (Gresham et al. 2000).

**Procedures**

The present study systematically investigated the relationship among race, suspension, expulsion, grade retention, the percentage of classes taken in a general education setting, and academic self-efficacy across three academic levels. Suspension, expulsion, grade retention, and the percentage of classes taken in a general education setting were used to comprise the latent variable Punitive and Isolating Experiences (PI). PI were then be used to predict students’ academic self-efficacy (ASE). These variables were directly pulled from items on the SEELS database for students in elementary school, middle school, and high school. Each educational level is comprised of student data in second, third, and fourth grade, sixth, seventh, and eighth grade, and ninth, tenth, and eleventh grade, respectively.

The SEM used to determine how well the model fits that dataset and in so doing, provided an estimate of the adequacy of the model. One model will be created for each educational level (elementary, middle, and high school). Thus, it was hypothesized that SEM will reveal similar goodness of fit of the model at each educational level. SEM procedures followed those provided by Schumacker and Lomax (2010) and by Mulaik and Millsap (2000).

**Structural equation model.** The model is provided in Chapter Four. This model is a visual representation of the relationships between the predictor and latency variables. The SEM is also how the model was statistically analyzed via statistical software (AMOS). The statistical analysis evaluated the fit of the model and the proposed relationships. The model was evaluated at three educational levels (elementary, middle, and high school). Prior to analyzing the SEM, confirmatory factor analysis (CFA) were run at each educational level to ascertain if the factor
structure of the measurement model (as defined by theory) is consistent with the relationship among the variables in the study. It is assumed that each punitive and isolating experience should be composed of one factor therefore the CFA for each wave should clearly fit the same factor structure. While conducting the CFAs, slight variations of the model were tested at each educational level to determine best potential fit. Please see Chapter Four for the outcomes of the CFA. For wave one expulsion and suspension variables were compressed into a signal variable in the CFA. This was done due to the fact that there were very few expulsions at this educational level.

The analysis is constructed so that grade retention, suspension, expulsion, and the percentage of classes that child takes in a general education setting produce a latent variable called punitive and isolating experiences (PI). The relationship between PI and ASE is also evaluated. A comparative group analysis was completed while confining the pathway between PI and ASE (Joreskog, 1971). Thus, the model suggests that race relates to grade retention, suspension, expulsion, and the percentage of classes that child takes in a general education setting. Likewise, the model assumes that these four variables contribute to a latent variable, PI. Instead of evaluating the direct relationship between grade retention, suspension, expulsion, and the percentage of classes that child takes in a general education setting and ASE, the relationship between PI and ASE will be analyzed.

**Development of predictor and latency variables.** Predictor variables were taken from items on the parent questionnaire (suspension, expulsion, and grade retention) and survey of program (percent of instructional time spent in regular education classrooms). Students’ race is present on each of the SEELS data files. PI is a latent variable and is composed of the predictor variables. Figure 4 and 5 displays the model that will be assessed.
Suspension and expulsion. Both the suspension and expulsion variables were created to reflect whether the students had been suspended or expelled during the academic years of 1999-2000, 2001-2002, and 2003-2004 for wave one, two, and three, respectively. The suspension variable does not differentiate between in-school and out-of-school suspensions. Both variables were collected in a Yes/No format, thus the data are dichotomized (0 = No, 1 = Yes).

Grade retention. Data on grade retention were provided in a series of variables. Initially, parents were asked if their child had ever been held back. If parents answered “Yes”, then they were asked to indicate the specific grade(s). The present study was only interested in whether the student had been held back during their current educational level. For example, for high school students only retentions that occurred in high school would be indicated, no elementary school or middle school retentions would be recorded for a high school student. For students in elementary school, we were only interested in second, third, and fourth grade. Likewise, high school students were only investigated in respect to ninth, tenth, and eleventh grade. In order to create a variable suitable for analysis, data from each variable was recoded into a new variable. SPSS syntax was used to record the four variables into one dichotomized variable. Table 5 provides the descriptive statistics for each wave of grade retention variable.

Table 5
Descriptive Statistics of the Created Grade Retention Variable

<table>
<thead>
<tr>
<th></th>
<th>Wave One</th>
<th>Wave Two</th>
<th>Wave Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = No</td>
<td>660596 (91.8%)</td>
<td>648041 (92.3%)</td>
<td>489777 (96.1%)</td>
</tr>
<tr>
<td>1 = Yes</td>
<td>59399 (8.2%)</td>
<td>53927 (7.7%)</td>
<td>20021 (3.9%)</td>
</tr>
<tr>
<td>N</td>
<td>719995</td>
<td>701968</td>
<td>509798</td>
</tr>
<tr>
<td>Mean</td>
<td>.0825</td>
<td>.0768</td>
<td>.0393</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.27512</td>
<td>.26631</td>
<td>.19424</td>
</tr>
</tbody>
</table>

Percent of classes that child takes in a general education setting. This variable is intended to inform users of how much time a student is spending in general education classrooms compared to alternative and more isolating environments (i.e. special education classrooms). A
description of the creation of this variable is provided under measures. This variable is expressed in a percentage with higher percentages denoting more time spent in general education settings.

**Punitive and isolating experience (PI).** PI is a latent variable created by each of the aforementioned variables. PI is based on Wald and Losen’s (2003) description of the SPP. A school’s use of suspension, expulsion, grade retention, and special education placement are all based on school policies that can be interpreted to be both punitive and isolating.

**Data extraction.** The SEELS CD-ROM contains the data for all three waves of data in SPSS data files and SAS data files, data file documents, data dictionaries, SEELS documentation, and the assessment instruments/survey/interview questions. Each data file was composed of the student data from one instrument for one wave. The current study utilized data from three instruments across all three waves, resulting in nine individual data files. Dictionary PDF files provide descriptions of each variable to allow variables to be selected and understood. The database was designed so that students are represented across all three waves.

**Data weighting.** To analyze information from a single instrument within a single wave, the corresponding weight within that data file should be used. To analyze data from two or more instruments (cross-instrument), as the present study did, the SEELS creators suggest using the weight of the instrument with the smallest sample size ($n$). The reason for using the weight of the instrument with the smallest $n$ is that it is assumed that the students who are not represented in the smallest sample will be dropped from the analysis. As seen in Table 1, the smallest un-weighted sample size across each wave is the Direct Assessment. Thus, the direct assessment weight was used from each wave. These weights were entered into SPSS to create correlation matrices, which were used to enter data in AMOS.
Data analyses. All data formatting occurred in SPSS. All analyses were performed in AMOS. AMOS is a computer program that allows researchers to test SEMs using correlation matrices that were created in SPSS. SEM was used in the analysis. The SEM models used in the study are presented in Figure 4 and 5. Each wave was entered individually into the SEM in a discrete manner allowing for the model to be tested for each wave individually. The model indicated how well PI predicts ASE at each educational level. This analysis tested how well Bandura’s cognitive behavioral theory can be used to explain the relationship among the variables in PI. This model also indicated how the model differs between black and white students.

Multivariate normal distribution. According to Jackson, Gillaspy, & Purc-Stephenson (2009), when maximum likelihoods are utilized, as are done in the present study, the analysis assumes that the data demonstrates multivariate normality (MVN). Failure to achieve MVN will result in inflated chi-square statistic which can result in a greater likelihood of Type 1 errors. Due to the weighting procedures utilized by the SEELS data, SPSS is unable to test for MVN. Thus it is not possible to determine if the present data has MVN. Although MVN and single variable tests of normality are not equivalent, the present study is only able to present single variable normally data. Table 6 provides skewness, kurtosis, statistic, and degrees of freedom of each other variables across each wave. Table 6 also indicates that all of the variables used within this study are statistically different from a normal distribution. This may result in an incorrect appears of fit for variables that rely heavily on the chi-square test.
### Table 6

*Test of Normality and Descriptive Distribution Data*

<table>
<thead>
<tr>
<th>Wave/Variable</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Statistic</th>
<th>Df</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wave 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expelled*</td>
<td>24.226</td>
<td>584.891</td>
<td>.515</td>
<td>719412</td>
</tr>
<tr>
<td>Suspended*</td>
<td>4.234</td>
<td>15.929</td>
<td>.541</td>
<td>715780</td>
</tr>
<tr>
<td>Retained*</td>
<td>3.030</td>
<td>7.180</td>
<td>.535</td>
<td>718116</td>
</tr>
<tr>
<td>% Gen Ed*</td>
<td>-1.101</td>
<td>.499</td>
<td>.179</td>
<td>512332</td>
</tr>
<tr>
<td>Self-Efficacy*</td>
<td>-1.231</td>
<td>1.708</td>
<td>.208</td>
<td>603820</td>
</tr>
<tr>
<td>Race*</td>
<td>1.367</td>
<td>-.131</td>
<td>.483</td>
<td>725487</td>
</tr>
<tr>
<td><strong>Wave 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expelled*</td>
<td>7.115</td>
<td>48.628</td>
<td>.536</td>
<td>631351</td>
</tr>
<tr>
<td>Suspended*</td>
<td>1.632</td>
<td>.664</td>
<td>.499</td>
<td>595768</td>
</tr>
<tr>
<td>Retained*</td>
<td>3.107</td>
<td>7.655</td>
<td>.536</td>
<td>642373</td>
</tr>
<tr>
<td>% Gen Ed*</td>
<td>-.618</td>
<td>-.613</td>
<td>.130</td>
<td>469892</td>
</tr>
<tr>
<td>Self-Efficacy*</td>
<td>-.879</td>
<td>.186</td>
<td>.179</td>
<td>797369</td>
</tr>
<tr>
<td>Race*</td>
<td>1.309</td>
<td>-.287</td>
<td>.479</td>
<td>829794</td>
</tr>
<tr>
<td><strong>Wave 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expelled*</td>
<td>5.661</td>
<td>30.046</td>
<td>.540</td>
<td>468721</td>
</tr>
<tr>
<td>Suspended*</td>
<td>1.556</td>
<td>.421</td>
<td>.495</td>
<td>468704</td>
</tr>
<tr>
<td>Retained*</td>
<td>4.897</td>
<td>21.985</td>
<td>.541</td>
<td>467273</td>
</tr>
<tr>
<td>% Gen Ed*</td>
<td>-.802</td>
<td>-.370</td>
<td>.187</td>
<td>465876</td>
</tr>
<tr>
<td>Self-Efficacy*</td>
<td>-.909</td>
<td>.634</td>
<td>.160</td>
<td>627720</td>
</tr>
<tr>
<td>Race*</td>
<td>1.383</td>
<td>-.087</td>
<td>.484</td>
<td>654272</td>
</tr>
</tbody>
</table>

*Note.* * the variable differs significantly from the normal distribution.
Chapter Four

Results

The purpose of the present study was to investigate the relationship between race, suspensions, expulsions, grade retention, and special education placement with students’ academic self-efficacy. This study aimed to gain a greater understanding of how punitive and isolating experiences relate to the academic self-efficacy of black and white male students in elementary, middle, and high school. In this chapter, a confirmatory factor analysis for each wave is discussed and the results of each of the proposed research questions are provided.

Fit of the Measurement Model

Results of the CFA indicated that the data within wave one resulted in negative variance. This suggests that the measurement model is not valid. As discussed in Chapter 3, in wave one, expulsion and suspension were collapsed into one variable to create more variability within the data. Despite collapsing the variables, many of the scores in wave one have low means and low standard deviations (which suggest lack of variability). Please see Table 10 for descriptive statistics. This lack of variability is likely responsible for the negative variance seen in the CFA. Because the measurement model was not valid for the first wave of the data, no additional analyses for wave one were conducted.

Table 6 provides the resulting scores for each different fit index across the CFA of waves two and wave three data. Figure 2 and Figure 3 display the measurement models that were used for both wave two and wave three, respectively. Please note that Figure 3 does not include expulsion as a variable. This is because the measurement model fit best without expulsion included. Please see Chapter 5 for a discussion of possible reasons for this phenomenon.
Table 6

*Fit Indices for CFA*

<table>
<thead>
<tr>
<th>Waves/Models</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 2 CFA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default model</td>
<td>.996*</td>
<td>.966*</td>
<td>.064*</td>
<td>.0223*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.877</td>
<td>.00</td>
<td>.200</td>
<td>-</td>
</tr>
<tr>
<td>Wave 3 CFA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default model</td>
<td>.999*</td>
<td>.989*</td>
<td>.046*</td>
<td>.0146*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.878</td>
<td>.00</td>
<td>.255</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* * Score meets criterion of good fit for the given index.

For the CFA of wave two, fit indices indicate that the measurement model appropriately represented that data (RMSEA = .064, CFI = .966, GFI = .996, SRMR = .0223). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the p < .01 level. For the CFA of wave three, fit indices indicate good appropriately represented that data (RMSEA = .046, CFI = .989, GFI = .999, SRMR = .0146). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the p < .01 level. These results suggest a strong fit for the CFA and support the use of punitive and isolating experiences as a latent construct.

Figure 3 and Figure 4 display the pathway diagrams of the models that were used for analysis in the SEM for wave two and wave three, respectively. In Figures 1, 2, 3, and 4, each circle containing an “e” followed by a number, represent the residual of the respective variable. Additionally, “Sus” stands for suspension, “Exp” stands for expulsion, “Gened” stands for the percentage of classes that child takes in a general education setting, “Heldback” stands being held back in grade, “PI” and for punitive and isolating experiences, and “ASE” stands for academic self-efficacy.
Punitive and Isolating School Policies and Academic Self-Efficacy; p.57

Figure 2. CFA Measurement Models for Wave Two

Figure 3. CFA Measurement Models for Wave Three
Figure 4. Pathway Diagram for Wave Two

Figure 5. Pathway Diagram for Wave Three
Model Fit

Question one asks if the proposed models fit the dataset. Table 7 provides fit criteria and reference for each criterion (GFI, CFI, SRMR and RMSEA). Table 8 provides the resulting scores for each fit index across waves two and three data. The following section will report on each of the indices for each of the waves.

Table 7
Criterion for Fit

<table>
<thead>
<tr>
<th>Fit Indicator</th>
<th>Criterion</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFI</td>
<td>&gt; 0.95</td>
<td>(Miles and Shevlin, 1998)</td>
</tr>
<tr>
<td>CFI</td>
<td>≥ 0.95</td>
<td>(Hu and Bentler, 1999)</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt; 0.07</td>
<td>(Steiger, 2007)</td>
</tr>
<tr>
<td>SRMR</td>
<td>&lt; 0.08</td>
<td>(Hu and Bentler, 1999)</td>
</tr>
</tbody>
</table>

Note. GFI = Goodness-of-Fit Index; CFI = Confirmatory Fit Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual.

For wave two combined data model, fit indices indicate good model fit ($\chi^2 (5) = 20274.37$, $RMSEA = .07$, $CFI = .91$, $GFI = .99$, $SRMR = .035$). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the .001 level. For the wave two group analysis (constrained) model, fit indices indicate good model fit ($\chi^2 (11) = 38013.43$, $RMSEA = .07$, $CFI = .85$, $GFI = .98$, $SRMR = .070$). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the .001 level. For wave three combined data model, fit indices indicate good model fit ($\chi^2 (2) = 1238.79$, $RMSEA = .03$, $CFI = .99$, $GFI = .99$, $SRMR = .012$). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the .001 level. For the wave three group analysis (Constrained) model, fit indices indicate good model fit ($\chi^2 (4) = 3197.89$, $RMSEA = .05$, $CFI = .95$, $GFI = .99$, $SRMR = .048$). Corresponding path coefficients between endogenous indicators and latent construct are each significant at the .001 level. These results suggest that the model for both waves fit the dataset.
Table 8

*Fit Indices*

<table>
<thead>
<tr>
<th>Waves/Models</th>
<th>GFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave 2 Combined Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default model</td>
<td>.99*</td>
<td>.91</td>
<td>.07*</td>
<td>.035*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.89</td>
<td>.00</td>
<td>.16</td>
<td>-</td>
</tr>
<tr>
<td>Wave 2 Multi Group Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constrained model</td>
<td>.98*</td>
<td>.85</td>
<td>.07*</td>
<td>.070*</td>
</tr>
<tr>
<td>Unconstrained model</td>
<td>.99*</td>
<td>.87</td>
<td>.06*</td>
<td>.042*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.88</td>
<td>.00</td>
<td>.13</td>
<td>-</td>
</tr>
<tr>
<td>Wave 3 Combined Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Default model</td>
<td>.99*</td>
<td>.99*</td>
<td>.03*</td>
<td>.012*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.90</td>
<td>.00</td>
<td>.18</td>
<td>-</td>
</tr>
<tr>
<td>Wave 3 Multi Group Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constrained model</td>
<td>.99*</td>
<td>.95</td>
<td>.05*</td>
<td>.048*</td>
</tr>
<tr>
<td>Unconstrained model</td>
<td>.99*</td>
<td>.97*</td>
<td>.04*</td>
<td>.017*</td>
</tr>
<tr>
<td>Saturated model</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Independence model</td>
<td>.91</td>
<td>.00</td>
<td>.13</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* *Score meets criterion of good fit for the given index.*

Table 9 provides the standardized regression weights for each pathway within the combined data model and the pathways for both the black and white student from the group analysis model. As denoted in Table 9, each weight value is statistically significant. This is because the probability of getting the respective critical ratios for each pathway across each wave is less than 0.001 and thus the regression weights are all significantly different from zero at the 0.001 level. This suggests that each of the pathways in each of the models statistically significant and thus support the use of the model.
The results of question one support the use of the purposed model. The utilized fit indices and each individual pathway within the model support the validity and overall fit of the model. This suggest that punitive and isolating policies do contribute to a latent variable (PI) and that PI predicts ASE.

**Differences between Groups and Relationships between Variables**

**Questions 2.A and 2.B.** Research question two examines the differences in rates of black and white students’ exposure to punitive and isolating school policies. Research question number two also examines differences in levels of academic self-efficacy between black and white students and differences of the relationship between punitive and isolating policies and academic self-efficacy. Table 10 and Table 11 provide the *mean (m), standard deviation (sd), and sample size (n)* for each variable across each wave and split into white, black, and total scores. The scores provided in Table 10 and 11 were used in a total of 15 independent-sample *t* tests. These *t* tests were used to compare the mean scores of Exp+Sus, expulsion, suspension, grade retention, and self-efficacy across black and white student in each wave. The effect sizes of each significant difference are also provided. Effect sizes were calculated using Cohen’s *d* (Cohen, 1988). Cutoffs of .20, .50, and .80 are used to indicate small, medium, and large effect sizes, respectively. Additionally, a Mann-Whitney *U* test was done to compare the mean percent of time in general education class between black and white students. Mann-Whitney *U* was used for

---

**Table 9**

*Standardized Regression Weights*

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Wave 2 Combined</th>
<th>Black</th>
<th>White</th>
<th>Wave 3 Combined</th>
<th>Black</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sus ↔ PI</td>
<td>.504*</td>
<td>.273*</td>
<td>.633*</td>
<td>.550*</td>
<td>.160*</td>
<td>.659*</td>
</tr>
<tr>
<td>Exp ↔ PI</td>
<td>.497*</td>
<td>.799*</td>
<td>.364*</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Gened ↔ PI</td>
<td>-.348*</td>
<td>-.474*</td>
<td>-.389*</td>
<td>-.362*</td>
<td>-.357*</td>
<td>-.161*</td>
</tr>
<tr>
<td>Heldback ↔ PI</td>
<td>.497*</td>
<td>.676*</td>
<td>.389*</td>
<td>.624*</td>
<td>.888*</td>
<td>.585*</td>
</tr>
<tr>
<td>Self-Efficacy ↔ PI</td>
<td>-.037*</td>
<td>-.051*</td>
<td>-.077*</td>
<td>-.073*</td>
<td>-.075*</td>
<td>-.167*</td>
</tr>
</tbody>
</table>

*Note. *p* < .001.*
Punitive and Isolating School Policies and Academic Self-Efficacy; p.62

these variables because a t test is not appropriate for testing the difference between percentages.

Mann-Whitney U is more lenient in what types of data can be used.

Table 10

<table>
<thead>
<tr>
<th></th>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>Sd</td>
<td>n</td>
</tr>
<tr>
<td>Exp+Sus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>.034</td>
<td>.182</td>
<td>410396</td>
</tr>
<tr>
<td>Black</td>
<td>.086</td>
<td>.280</td>
<td>93005</td>
</tr>
<tr>
<td>Total</td>
<td>.044</td>
<td>.205</td>
<td>503401</td>
</tr>
<tr>
<td>Expelled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Suspend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Retained</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>.042</td>
<td>.201</td>
<td>410396</td>
</tr>
<tr>
<td>Black</td>
<td>.194</td>
<td>.396</td>
<td>93005</td>
</tr>
<tr>
<td>Total</td>
<td>.070</td>
<td>.256</td>
<td>503401</td>
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<tr>
<td>%GenEd</td>
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<td></td>
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<tr>
<td>White</td>
<td>79.230</td>
<td>24.387</td>
<td>410396</td>
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<tr>
<td>Black</td>
<td>68.268</td>
<td>26.562</td>
<td>93005</td>
</tr>
<tr>
<td>Total</td>
<td>77.204</td>
<td>25.165</td>
<td>503401</td>
</tr>
</tbody>
</table>

Table 11

<table>
<thead>
<tr>
<th></th>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>m</td>
<td>Sd</td>
<td>n</td>
</tr>
<tr>
<td>Self-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>13.125</td>
<td>1.874</td>
<td>472628</td>
</tr>
<tr>
<td>Total</td>
<td>13.150</td>
<td>1.884</td>
<td>603821</td>
</tr>
</tbody>
</table>
In wave one, a significant difference was found between black and white students for Exp+Sus suggesting that black students were exposed to more expulsions and suspension. However, the difference only indicates a small effect size \( (t(503399) = 70.2968, p < .001; d = 0.2202085) \). A significant difference was also found between black and white students for expulsion in wave two \( (t(380029) = 63.2839, p < .001; d = 0.2541971) \) and in wave three \( (t(388807) = 58.6134, p < .001; d = 0.2185574) \) suggesting that black students were exposed to more expulsions than their white peers. However, the differences in expulsion rates for both wave two and wave three only indicate a small effect size. For suspension, a significant difference was found between black and white students in both wave two \( (t(344406) = 129.9537, p < .001; d = 0.6101274) \) and wave three \( (t(337861) = 248.6678, p < .001; d = 0.9377520) \). The differences in the rate of suspensions in wave two had a medium effect size and in wave three the difference had a large effect size.

A significant difference was found between black and white students for grade retention in wave one \( (t(503399) = 168.2150, p < .001; d = 0.4840457) \), wave two \( (t(344406) = 23.0127, p < .001; d = 0.1205448) \), and wave three \( (t(50946) = 203.5241, p < .001; d = 0.5660670) \). The difference in the rates of retention resulted in effect sizes that were between small and medium for wave one, less than a small effect size for wave two, and a medium effect size for wave three. Finally for self-efficacy, a significant difference was found between black and white students in wave one \( (t(603819) = 19.5618, p < .001; d = 0.0606337) \), wave two \( (t(797400) = 63.2863, p < .001; d = 0.1744604) \), and wave three \( (t(627704) = 111.8532, p < .001; d = 0.3727437) \). The difference in the mean self-efficacy scores result in effect sizes that is less than a small effect for wave one and wave two, and an effect size that was between small and medium for wave three.
A Mann-Whitney $U$ test was calculated by examining the rank of black and white students in respect to their mean percent of time in general education class. In wave one, black students had a statistically significantly lower rank ($m_{place} = 169455.83$) than white students ($m_{place} = 246250.59; U = 1.453E10, p < .001$). In wave two, black students had a statistically significantly lower rank ($m_{place} = 202703.90$) than white students ($m_{place} = 268028.94; U = 9.324E9, p < .001$). Finally, in wave three, black students had a statistically significantly lower rank ($m_{place} = 173496.01$) than white students ($m_{place} = 244094.11; U = 1.007E10, p < .001$).

Thus, there is a statistically significant difference in the amount of that black and white students are exposed to punitive and isolating policies resulting in black students experiencing higher rates of punitive and isolating policies than white students across each variable and wave. Additionally, black students demonstrated higher academic self-efficacy than white students across each wave. It is important to note that only suspension (in wave two and three) and retention (in wave three) have effect sizes in the medium or large range. This suggests that although each $t$ test indicates a significant different only a few of the differences are meaningful.

The data in Table 10 was also examined by comparing how likely black and white students were of being exposed to each punitive and isolating policy. In wave one, black students were 2.5 times more likely to be either expelled or suspended than their white peers. In wave two and three black students were 4.1 and 3.3 times more likely to be expelled than their white peers, respectively. Likewise, in wave two and three, black students are 3.1 and 5.9 times more likely to be suspended than their white peers, respectively. For grade retention in wave one, two, and three, black students were 4.6, 1.4, and 48.7 times more likely to be retained than their white peers, respectively. Percent of time spent in the general education setting was not able to be compared in this fashion due to restrictive properties of percentages.
Questions 2.C. This question specifically examines the relationships between punitive and isolating policies and academic self-efficacy scores. In Table 12, the correlations between each punitive and isolating school policy and self-efficacy are displayed. When the relationship between each punitive and isolating policy and self-efficacy is examined outside of the parameters of the model, several interesting trends can be identified. The relationship between each punitive and isolated policy and self-efficacy differ significantly between black and white students. In four instances, the direction of the correlation changes completely (- to +) between black and white students within the same wave. As displayed in Table 12, in wave one, higher rates of Exp+Sus are associated with higher levels of self-efficacy for black students and lower levels of self-efficacy for white students. Likewise, in wave two, higher rates of expulsion are associated with higher rates of self-efficacy for black students but lower self-efficacy for white students. Again in wave two, higher levels of inclusion are associated with lower rates of self-efficacy for black students but higher rates for white students. Finally, in wave three, higher rates of retention are associated with higher levels of self-efficacy for black students but lower levels for white students. In addition to the differences in the direction of correlation between ethnicities, no correlation coefficients stayed constant across race within a single wave. The variability in correlation coefficients across race suggests that the relationships between each punitive and isolating policy and self-efficacy differ significantly between black and white students.
Punitive and Isolating School Policies and Academic Self-Efficacy; p.66

Table 12
*Correlations to Self-Efficacy*

<table>
<thead>
<tr>
<th>Wave 1</th>
<th>Wave 2</th>
<th>Wave 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>White</td>
</tr>
<tr>
<td>N</td>
<td>603820</td>
<td>472622</td>
</tr>
<tr>
<td>Sd</td>
<td>1.884</td>
<td>1.873</td>
</tr>
<tr>
<td>Exp+Sus</td>
<td>.0290</td>
<td>-.006*</td>
</tr>
<tr>
<td>Expelled</td>
<td>-.071*</td>
<td>-.097*</td>
</tr>
<tr>
<td>Suspend</td>
<td>.069*</td>
<td>.014*</td>
</tr>
<tr>
<td>Retained</td>
<td>.120*</td>
<td>.146*</td>
</tr>
<tr>
<td>%GenEd</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. *p< .01.

**Multi-Group Analysis**

This questions aims to determine if the model fits black and white students differently.

To complete the group analysis, the pathway between punitive and isolating experiences and academic self-efficacy was constrained. To determine if the constrained model fit the data worse than the unconstrained model, a chi-square difference test was run (Joreskog, 1971). To calculate the chi-square difference test, the chi-square of the constrained model was subtracted from the chi-square of the unconstrained model, as well the degrees of freedom of the constrained model was subtracted from the degrees of freedom of the unconstrained model. Calculations of the chi-square differences and associated degrees of freedom were compared to the chi-square distribution table of critical values. The chi-square difference test revealed a statistically significant difference in fit between the constrained and unconstrained models with the unconstrained model being a better fit as indicated by its significantly smaller chi-square value. This finding suggests that punitive and isolating experiences have a different type of impact on black and white students’ academic self-efficacy. This difference indicates that data from black and white students should be analyzed separately. See Table 13 for differences in chi-squares, degrees of freedom, and cutoff scores required to demonstrate significance.
Table 13

<table>
<thead>
<tr>
<th></th>
<th>Chi-Square</th>
<th>df</th>
<th>p = .001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wave Two</td>
<td>-5,513.974</td>
<td>1</td>
<td>10.83</td>
</tr>
<tr>
<td>Wave Three</td>
<td>-3,238.787</td>
<td>1</td>
<td>10.83</td>
</tr>
</tbody>
</table>
Chapter Five

Discussion

A discussion of the results will follow in this chapter. First the results will be discussed in sequence based on the research questions. After the findings have been explored, a discussion of the limitations of the study will be addressed. Areas for future research will then be reviewed.

Model Fit

Confirmatory factor analysis (CFA). Research question one asks if the model is supported by the data. This question was answered several ways. First it is important to assess whether the variables that are being considered punitive and isolating school policies contribute to a single construct (punitive and isolating experiences), as assessed by the CFA. Based on the results of the present study, the CFA for wave one was not supportive of suspensions, expulsions, grade retention, and special education placement constituting a single construct. This suggests that the model does not fit wave one. However, the CFA for wave two and three demonstrated that the included variables did contribute to a single construct.

It was hypothesized that some variables may contribute to the model differently at different educational levels. Likewise it was believed that the model fit would vary dependent on the relationships between variables. Results of the CFA indicate that the variables that contribute to the single construct (punitive and isolating experiences) did vary across educational level. The results of the present study do not indicate why the CFA was not significant in elementary school but was significant in middle and high school. However, one possible explanation of this phenomenon is the lower rate of expulsion, suspension, and increased use of inclusion in elementary school when compared to middle and high school (as demonstrated in Table 10). Another possible explanation is that elementary school aged students do not have a long enough
history in school to sufficiently demonstrate the involvement of the variables into a single construct.

Another result of the CFA was that for wave two, inclusion of expulsion strengthened the model. For wave three, however, the model was strongest without expulsion in the model. It is unclear why expulsion did not contribute to the construct in high school but did in middle school. It is possible that in high school, expulsion is more commonly used for first offenders (due to increased severity and risk of behavioral problems at higher grades) than in middle school and thus there may be less shared variance between expulsion and suspension. Although the author was unable to find any literature on the differences in first time offenders who are expelled across different educational levels, there is evidence that the severity of behavioral problems increase in high school as compared to middle school. For example, Robers, Zhang, and Truman, (2012) found that the number of schools that report violent incidents was equivalent between middle and high school; however, the number of schools that reported serious violent acts was higher in high school. Thus, although violent acts occur across both middle and high school, the severity of the acts increases during high school. Also rates of theft and gang involvement were higher in high school when compared to middle school. Likewise a higher percentage of in-school offences were reported to the police in high school compared to middle school. Finally, a higher percent of high schools (as compared to both middle and elementary schools) took serious disciplinary action (removal from school or placement in an alternative program) for violent offences, possession and distribution of drugs or alcohol, and possession of a weapon, firearm, or explosive (Robers, Zhang, and Truman, 2012). These findings support the idea that high schools may take more drastic disciplinary action than middle school and thus may change the way these variables contribute to the measurement model.
The CFA confirmed that, in middle and high school, punitive and isolating experiences can be conceptualized as a single construct and thus allowed more extensive SEM to be complete. After completing the SEM for wave two and wave three, several patterns became apparent. First, it should be noted that all standardized regression weights for pathways within wave two and wave three were statistically significant. Next, as seen in Table 8, there are several patterns across the two waves. For example, the path between suspensions and punitive and isolating experiences is stronger for white students in both wave two and wave three than it is for black students. In contrast, the paths between grade retention and punitive and isolating experiences are stronger for black students in both waves. For each pathway, the group with the strongest path in wave two is also the group with the strongest path in wave three. This suggests that each variable influences each group differently and that there is some consistency in terms of how each group is influenced by each variable at the two educational levels. This may be due to a variety of extraneous variables, such as, cultural differences between groups, socio-cultural status, inter-student social/interactional differences, and/or quality of instruction.

For example, one confounding variable could be the demographic makeup of the population of teachers in America, which is predominately comprised of white, middle-class and female (Gay, 2000). The difference in cultural experiences (between students and teacher) and a lack of teacher multicultural competence may result in patterns across grades. Likewise, urban schools (where black students are more likely to be educated) have higher rates of inexperienced teachers and teacher attrition (Howard, 2003; Ingersoll, 2001). As a result, teachers in urban settings are more likely to struggle with classroom discipline and behavioral management (Veenman, 1984; Wang, Odell, & Schwille, 2008). Cultural/community based variables are
likely to be consistent over time for both groups of students and may influence the impact of each policy.

**Differences between Groups and Relationships between Variables**

**Rates of punitive and isolating school policies and self-efficacy scores.** In question two, the specific research questions are looking at the difference in the rates of punitive and isolating policies between black and white students, academic self-efficacy scores between black and white students, and correlations between each punitive and isolating policy and academic self-efficacy between black and white students.

First, the findings are in agreement with a long history of empirical evidence that demonstrates that black males are exposed to significantly more punitive and isolating school policies than their white counterparts (Wald & Losen, 2003; NASP, 2003; Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006; Skiba & Rausch, 2004; Gordon et al., 2001; Anderson, Whipple, & Jimerson, 2002; Blackorby & Wagner, 1996). The present study enhances this literature by demonstrating that this disproportionality is also true for students receiving special education services.

When each policy is investigated and compared to the literature individually some similarities and differences are identified. In regards to expulsions, previous research suggests that black students who are in special education are 2 times more likely to be expelled than non-black students who are also in special education (Krezmien et al., 2006). Comparatively the present study found that in wave two, black students were 4.1 times more likely to be expelled than white students and in wave three, black students are 3.3 times more likely to be expelled than white students.
In regards to suspension, previous research suggests that black students are 2.6 times more likely to be suspended than their white peers (Wald & Losen, 2003). Comparatively, the present study demonstrated that in wave one, black students were 2.5 times more likely to be either expelled or suspended than white students. In wave two black students are 3.1 times more likely to be suspended than white students and in wave three, black students are 5.9 times more likely to be suspended than white students. It should be noted that the all students included in the present study qualify for special education services while previous research on suspensions utilized students from the general education setting.

In regards to grade retention, previous research suggests that that black students are more than 2 times more likely to be retained in grade than white students over their entire academic career (National Center for Education Statistics, 2006). Within a single year, 4.2% of black students are retained compared to 1.5% of white students (West, 2012). The present study demonstrated that in wave one, black students are 4.6 times more likely to be retained than white students. In wave two, black students are 1.4 times more likely to be retained than white students. Finally, in wave three, black students are 48.7 times more likely to be retained than white students. The large discrepancy that is seen between black and white high school students is the result of a significant decrease in the use of retention for white students, while rates of retention for black students remain relatively stable over time.

In regards to the amount of inclusion vs. substantially separate classroom it is difficult to compare previous research to the findings of the present study due to variation in data collection methods; however, some comparisons can be made. For example, previous research of students who qualify for special education, suggests that 37% of black students are in inclusion programs vs. 55% of white students. Likewise, 33% of black students are in substantially separate
classrooms vs. 16% of white students (Skiba, Poloni-Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006). In the present study, in wave one, black students spent on average 68.268% of their time in the general education setting vs. 79.230% of the time for white students. In wave two, black students spent on average 48.876% of their time in the general education setting vs. 68.869% of the time for white students. Finally, in wave three, black students spent on average 52.350% of their time in the general education setting vs. 74.921% of the time for white students.

Due to the large sample size of the present study, it is important to consider the effect size of each difference. Although the above paragraphs discussed a large number of statistically significant differences between black and white students, very few of these differences have effect sizes that are above the small range. Specifically, only middle school suspension rates and high school retention rates have a medium effect size and only high school suspension rates have a large effect size. This suggests that all other differences may not hold great value despite being statistically significant.

Previous research that looks at differences in academic self-efficacy between black and white students has resulted in mixed findings (Schunk & Meece, 2005). For example, Britner and Pajares (2001) and Roeser, Midgley, and Urdan (1996) found no differences in academic self-efficacy scores between black and white students. However, Pajares and Kranzler (1995) demonstrated lower levels of self-efficacy in mathematics for black students when compared to white students. A previous study that also used SEELS data and the same academic self-concept score that was used in the present study, found that black students had higher levels of confidence than white students; however, no effect sizes were provided (Wei & Marder, 2012). Results from the present study mirror the findings from Wei and Marder (2012) suggesting that black students do report higher level of academic self-efficacy than white students. However,
when effect sizes are examined these differences are below or within the small range, suggesting that the differences may not be meaningful.

When looking at correlation coefficients, as displayed in Table 11, no specific patterns were observable across waves. However, within each wave, the correlations differed significantly between black and white students for each variable. This suggests that the relationship between self-efficacy and school policies were different for the different groups of students studied. Some similarities and differences can be seen when each correlation is compared to the literature.

The author was not able to find any specific research on the relationship between expulsion and suspension and academic self-efficacy; however, there is evidence that students often interpret school removal as rejection (Skiba, Noam, 2002; Brown, 2007). Importantly, students’ perceptions of school staffs’ feelings towards them can influence their willingness to engage in school related activities (Nieto, 1999; Perez, 2000; Valenzuela, 1999). These previous findings would suggest that students’ academic self-efficacy may be negatively related to school removal (although not explicitly studied in previous research). The results of the present study both support and refute the idea that school removal would be negatively correlated with academic self-efficacy. For example, both black and white students in middle and high school have negative relationship between suspension and academic self-efficacy. Meaning there self-efficacy is more likely to be lower if they had been suspended. In contrast, black students in middle and high school that have been expelled were more likely to have high levels of self-efficacy. Likewise, both black and white high school students tended to have higher self-efficacy scores if they had been expelled.
Although the author was unable to identify any research that specifically looked at the relationship between grade retention and academic self-efficacy, there are mixed findings in the literature in respect to the relationship between grade retention and social emotional and behavioral measures. For example, some studies have demonstrated the retention is correlated with lower levels of self-esteem and school connectedness, in addition to increased problem behaviors and difficulties related to social adjustment (Jimerson et al., 1997; Jimerson & Ferguson, 2007; Nagin, Pagani, Tremblay, & Vitaro, 2003; Pianta, Tietbohl, & Bennett, 1997; Pagani et al., 2001). However, other studies have not demonstrated negative effects on problems behaviors (Gottfredson, Fink, & Graham, 1994) and social-emotional development (Hong & Yu, 2008). There does seem to be agreement in the literature that the benefits associated with retention decreased when retention occurred during a later grade (Pomplum, 1988). This pattern of retention being less beneficial for students is seen for white students (changing from a positive relationship in elementary and middle school to a negative relationship in high school). However, this pattern is not seen for black students who have a positive relationship between retention and academic self-efficacy in each educational level.

The author was also not able to find any research that specifically looked at the relationship between academic self-efficacy and level of inclusion for students who qualify for special education services. The literature does suggest that students with learning disabilities are at increased risk for developing learned helplessness (Cullen, 1985) and that they tend to view their failures as uncontrollable, attributing their difficulties to low levels of intellect, difficulty of the task, and teacher bias (Cullen, 1985). This suggests that those students who have learning disabilities may have lower levels of academic self-efficacy than students without learning disabilities. This does not directly relate to the present study because the present study used a
sample comprised of students from all 13 special education categories. Nevertheless, the present study demonstrated a positive relationship between being included in the regular education setting and high levels of academic self-efficacy for all students both black and white, except for black middle school students. It is not clear why this specific group would respond differently than each other group of students; however, there are some possible explanations. For example, during adolescence students can become more vulnerable to social expectations and culturally based stereotypes (Harter, 1999). Black middle school students that are in the regular education setting may be exposed to stereotypes more often than students who are taught in substantially separate settings. Thus, students who are included more may be influenced by stereotypes that women and non-white minorities are less skilled and academically oriented when compared to white men (Meece, & Scantlebury, 2006). Black middle school students may be at increased risk of these stereotypes influencing them due to their age and developmental level. The impact of peer influence on self-efficacy tends to peak between 8th and 9th grade and decrease through high school (Steinberg, Brown, and Dornbusch, 1996).

While considering the value of the present study’s correlational data it is important to consider the strengths of the relationships. Although all but two correlation coefficients was statistically significant, none of the coefficients demonstrate anything beyond a weak relationship between variables. Thus, it is difficult to make any strong meaningful conclusions based on the correlation data.

Despite the weak relationships, an interesting pattern can be seen within some of the variables. In some cases, the direction of the relationship is reversed (+ to -) between black and white students. For example, in wave two the correlation between the percentage of classes taught in the general education setting and self-efficacy for white students is .131, however, for
black students the correlation of the same variables is -.123. This means that for white students, higher levels of inclusion are associated with greater levels of self-efficacy, whereas with black students, higher levels of special education participation is associated with greater levels of self-efficacy. This brings a question into focus regarding why the same variable would impact two groups of students so differently. The literature provides some possible explanation for this difference. For example, black and white students are likely to experience differential levels of quality of instruction/teachers (Howard, 2003; Ingersoll, 2001). Additionally the literature suggests that black students may experience more negative interactions with their teachers than white students. Casteel (1998), found that in classes with a mixture of both black and white students, white teacher have more negative interactions with black students and provide black students with less positive interactions (i.e. praise) than they do for white students. This could possibly lead to beneficial effects of being removed from the classroom and due to the escape of negative teacher interactions.

**Multi-Group Analysis**

**Group analysis.** Research question three examines whether the model fits better when black and white students are included within one model or when the two groups are analyzed separately. The results of the chi-square difference test demonstrate that the model fits both groups significantly differently and thus the model fits better when they are analyzed separately. Ultimately, this finding represents the major hypothesis of the present study. It was believed that the academic experience of black and white students would be significantly different due to the more frequent use of disciplinary policies and exclusionary special education setting with black students. This study replicated the previously documented disproportionality of the use of punitive and isolating school policies (Wald & Losen, 2003; NASP, 2003; Skiba, Poloni-
Staudinger, Gallini, Simmons, & Feggins-Azziz, 2006; Skiba & Rausch, 2004; Gordon et al., 2001; Anderson, Whipple, & Jimerson, 2002; Blackorby & Wagner, 1996) while also demonstrating that the way that these experiences influence students’ academic self-efficacy is different across black and white students.

Importantly, the model fits the data in both wave two and three suggesting that punitive and isolating school policies contribute to a single construct and that this construct predicts academic self-efficacy. This is the first time, in the awareness of this writer, that this model has been statistically evaluated using a simultaneous analysis of the variables, such as is accomplished in a SEM. All pathways within the model are statistically significant. When the pathways between self-efficacy and punitive and isolating experiences are examined more closely, it is observed that although the pathways are statistically significant, the amount of variability within self-efficacy that is predicted by punitive and isolating experiences is small.

When looking at the beta weights for the pathway between punitive and isolating experiences and academic self-efficacy, it is observed that the greatest value is seen with white students in wave three (with a standardized regression weight of -.167). It was also observed that across wave one and wave two, punitive and isolating experiences predict for white students’ self-efficacy more effectively then for black students. This is particularly interesting because this model was designed based on literature that was primarily looking at the punitive and isolating journey of minority students through school (Wald & Losen, 2003), yet the model appears to best predict white students’ journey. This is also interesting considering that black students are exposed to punitive and isolating variables at higher rates than white students. The results may be influenced by the higher rates of academic self-efficacy scores seen within black students. These results raise the question of whether academic self-efficacy means the same thing across
diverse groups of students. It is possible that cultural factors may skew students’ report or perception of self-efficacy.

When beta weights are examined across waves, it is observed that punitive and isolating experiences more effectively predict academic self-efficacy in wave three than in wave two, suggesting that for older students, punitive and isolating experiences may have greater negative consequences. This could be related to the fact that adolescents go through cognitive, physical, and social changes that impact how they view their abilities (Schunk, & Meece, 2006). Due to these changes adolescents develop enhanced capacities for abstraction, reflection and social comparisons that cause self-evaluations to be more abstract and multidimensional (Harter, 1998). Likewise research has demonstrated that developmental factors can influence students’ academic self-efficacy. For example seventh grade students experience a decline in their self-efficacy (Eccles, Wigfield, & Schiefele, 1998; Wigfield et al., 1997). Finally, in adolescence, peer relationships have an increased influence on self-efficacy (Schunk & Miller, 2002). Each of these developmental influences on self-efficacy could impact why high school students are impacted by punitive and isolating experiences greater than middle school students.

Importantly, the present study’s findings support previous research on the impact of grade retention over time. Beta weights demonstrate that being retained a grade in high school contributes more to the latent variable, punitive and isolating experiences, than in middle school. Previous research suggests that the positive impact of being retained a grade decrease as students advance in grades and the potential negative impact may increase (Pomplum, 1988; Jacob & Lefgren, 2004). The findings of the present study replicate this. This is especially true for black students who seem to be more negatively impacted by grade retention than their white peers.
Finally, the fact that this model fits the database supports the use of Bandura’s Social Cognitive Theory as the theoretical underpinning of the model. The fact that black and white students fit the model differently supports the concept of self-efficacy and specifically supports the belief the actual experiences are strong contributors to the development of self-efficacy. As demonstrated in the present study, both groups of students are exposed to different school experiences and these experiences have a significant impact on student’s academic self-efficacy.

Although Social Cognitive Theory can help to explain the impact of punitive and isolating experiences, the small Bata weights between PI and ASE suggest that this concept may not be the only theory to consider. To fully explain the variability in academic self-efficacy scores more complex models may be required that utilize additional conceptual frameworks.

Limitations

The present study has a number of limitations that should be considered. This section will review the most salient limitations.

Multivariate normality (MVN). The first potential limitation to the present study is that the data used may not have MVN. The analysis to determine MVN could not be performed because of the weighting procedures required to be used with the database. However, preliminary analysis of non-multivariate normality suggests that many of the variables used in this study are skewed. In many cases this is due to the use of binary variables having “yes” or “no” as options. The potential risk of not having MVN is increased the chance of type one errors (rejecting the model when the model actually does fit the population) (Roberts & Ilardi, 2003). Fortunately, the present model and dataset appeared to be robust enough to overcome the increased likelihood of rejection.
Sample size. Another important limitation to the present study is the large sample size. Typically, a large sample size is desired in research in order to achieve enough power to demonstrate statistical significant. However, when a sample size becomes too big, differences, correlations, and coefficients that are statistical significant may not be meaningful due to the abundance of power in the test. Although the size of the actual sample is large, further extending the problem of power, the weighting procedures used in the SEELS database to make the dataset representative of the population of children attending special education in 1999-2005, gives the present study the effect of a very large sample size (see Chapter 4). Thus, all indications of statistical significance in this study be interpreted with caution, and regarded in terms of effect size.

Confounding variables. Another significant limitation of this study is that it does not address academic achievement. Academic achievement is important to consider when thinking about punitive and isolating school policies and self-efficacy. Academic achievement is often strongly connected to self-efficacy. Depending on how an individual conceptualize their own academic success or failure, their academic self-efficacy could vary significantly. Likewise, a student’s future behaviors and level of motivation may be in part based on a student’s history of academic success or failure. In the present study academic self-efficacy was used as the major outcome measure; however, academic achievement could have also functioned as an outcome measure in this study. The omission of academic achievement prevents the present study from looking at the academic experience of the students in the study within the context studies in the present study. Likewise, the present study did not address the quality of teachers or the climate of the school the student was attending. Both of these school-based variables can play a significant role on a student’s development of a self-identity. The SEELS database does include some
teacher variables; however, these variables were purposefully left out of the present study because the present study aimed to focus on students level data. Additionally this study did not include ecological factors such as family income and socio-economic status, immigrant status, language barriers, or community/environmental variables. This study focused on a select number of variables that easily fit within the concept of punitive and isolating experiences; however, any of these other variables may have a significant impact on the development of academic self-efficacy.

**Measurement procedures.** One of the largest potential limitations in the present study was that the measure that was used to represent academic self-efficacy was actually designed to measure academic self-concept. Self-efficacy and self-concept are often used interchangeably; however, in the strict sense they are not synonymous. The designers of the utilized database supported the use of the measure to represent self-efficacy and based on the questions that were asked to create this score (but cannot be published because of copyright restrictions), the scale does appear to overlap self-efficacy. It is, however, a valid concern if some researchers and theorist may disagree with the use of this scale as measuring self-efficacy.

**Future Research**

The focus of future research should be in three main directions. First, future research should continue to demonstrate the negative impact of punitive and isolating school policies by expanding upon the population of students that were used in the present study (i.e. include data from female students or students with more diverse racial identities). Second, future research should move in the direction of experimental studies to demonstrate causality with greater controls. Third, research should focus on identifying and dispersing effective alternatives strategies and policies.
Expanding the population. The first potential direction is to test the model from the present study with data from other demographic groups. For example, it would be interesting to determine if this model would fit populations of Latino or Asian boys. Specifically, this would be interesting to investigate because both groups of students are exposed to significantly different amounts of school discipline. For example, Asian students have been found to have the lowest rates of school discipline (compared to all other racial/ethnic groups of students), while Latino/Hispanic student tend to receive higher then both Asian and white students; however, not as high as black students (Wallace, Goodkind, Wallace, & Bachman, 2008). It would also be interesting to assess how data from female students would fit this model. The present study also looked at a population of students that all qualified for special education. It would be interesting to consider how this model would fit with students who do not qualify for an individualized education program. A minority of student qualify for special education. Expending the scope of research to students in the general education setting would provide substantial more information about students’ school experiences and would allow findings to be generalizable to larger groups of students.

Confounding variables: The addition of several potentially confounding variables such as academic achievement, quality of teachers/instruction, and ecological/demographic data (i.e. school climate, family income, and parent education) could provide additional information and help control for potential extraneous variables. Additionally, controlling for disability category could provide significant amounts of data on how students with different disabilities respond to punitive and isolating experiences. The present study demonstrated support for the suggested model; however, punitive and isolating experiences only explained a small amount of the
variability within academic self-efficacy. Expanding the variables that are used within the model may help explain more of the variance.

**Experimental design.** The present study used existing data and thus it was not an experimental study. Future studies that systematically control for exposure to punitive and isolating policies could provide significantly to the understanding of how punitive and isolating experiences impacts students’ self-efficacy and academic achievement.

**Alternative policies.** Finally, research on effective and feasible alternatives to punitive and isolating school policies need to be completed to provide schools with alternative ways to manage behavior and keep schools safe. Just as important as identifying alternative strategies, it is necessary to identify how to effectively use new strategies in schools and provide effective training in schools to teachers and administrators on how to use them. Thus, the focus of future research should be on continuing investigate the possible negative impact of punitive and isolating school policies and identifying effective alternatives strategies and policies.
References


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