

ABSTRACT

Title of dissertation: SCHOOL-BASED REFERRALS TO THE JUVENILE COURTS: PREVALENCE AND CHARACTERISTICS IN SEVERAL STATES

Pamela Cichon Wruble, Doctor of Philosophy, 2016

Dissertation directed by: Professor Peter E. Leone
Department of Counseling, Higher Education and Special Education

Effective school discipline practices are essential to keeping schools safe and creating an optimal learning environment. However, the overreliance of exclusionary discipline often removes students from the school setting and deprives them of the opportunity to learn. Previous research has suggested that students are being introduced to the juvenile justice system through the use of school-based juvenile court referrals. In 2011, approximately 1.2 million delinquency cases were referred to the juvenile courts in the United States. Preliminary evidence suggests that an increasing number of these referrals have originated in the schools. This study investigated school-based referrals to the juvenile courts as an element of the School-to-Prison Pipeline (StPP). The likelihood of school-based juvenile court referrals and rate of dismissal of these referrals was examined in several states using data from the National Juvenile Court Data Archives. In addition, the study examined race and special education status as predictors of school-based juvenile court referrals. Descriptive statistics, logistic regression and odds ratio, were used to analyze the data, make conclusions based on the findings and recommend appropriate school discipline practices.

SCHOOL-BASED REFERRALS TO THE JUVENILE COURTS:
PREVALENCE AND CHARACTERISTICS IN SEVERAL STATES

by

Pamela Cichon Wruble

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2016

Advisory Committee:

Dr. Peter Leone, Professor, Chair

Dr. Tara Brown, Assistant Professor

Dr. Carolyn Fink, Research Associate

Dr. Robert Marcus, Associate Professor

Dr. Margaret McLaughlin, Professor

@Copyright by

Pamela Cichon Wruble

2016

Acknowledgements

I would like to thank my Committee Chair, Dr. Peter Leone, for his support, guidance and encouragement throughout my doctoral program. Dr. Leone's support as my advisor has made it possible for me to achieve my personal and professional goals. I am extremely fortunate to have had him as my extraordinary mentor.

I would also like to thank Dr. Maggie McLaughlin, who supported me in many ways throughout my doctoral program and the dissertation process. In addition, I would like to thank Dr. Carolyn Fink for her flexibility and participation in all phases of my dissertation. I also would like to thank Drs. Tara Brown and Robert Marcus for their participation as Committee Members. All committee members provided me with valuable feedback and knowledge related to their areas of expertise. Lastly, I thank the faculty, staff and students in the College of Education at the University of Maryland who supported me throughout my program.

I would like to extend a massive thank you to Dr. Mike Krezmien, who supported me throughout the entire data analysis process. Your support and expertise allowed me to conduct meaningful and appropriate data analyses.

Thank you to Sarah Hockenberry at the National Juvenile Court Data Archive (NJCDA) for her support obtaining consent from all participating states. Also, thank you to all other NJCDA staff for their hard work and determination in providing me with the data files in a timely manner.

Thank you to all of my colleagues at Loyola University Maryland, especially Dr. Robert Helfenbein, who were extremely supportive and flexible during the last stages of my dissertation.

I must thank all of my family and friends for the love and support they provide me on a daily basis. Specifically, I thank my amazing husband, Mark, for the sacrifices he made to help me achieve my personal and professional goals. Also, I thank my parents for instilling the many character attributes, specifically determination and strong work ethic, needed to successfully reach my goals. I am truly lucky to have parents who have been influential, positive role models throughout my life.

Table of Contents

Acknowledgements.....	ii
List of Tables	vi
List of Figures	vii
List of Abbreviations	viii
CHAPTER 1: INTRODUCTION.....	1
School Discipline	2
The Purpose of School Discipline.....	3
Legislation	3
Student Characteristics	5
Current Research.....	8
Purpose.....	16
Research Questions	17
CHAPTER II: LITERATURE REVIEW	18
Review of Literature.....	19
Zero Tolerance.....	22
Exclusionary Discipline.....	22
Disparate Impact.....	24
Juvenile Justice Involvement and the School-to-Prison Pipeline.....	26
Summary of Findings	28
Methodological Review	28
Data Collection and Data Analysis.....	28
Threats to Validity.....	29
Limitations.....	29
Synthesis.....	30
CHAPTER III: METHOD	34
Data Collection and Data Source.....	34
NJCDA.....	34
Case-level Data.....	35

Court-level Data.....	35
NCES.....	36
Subjects and Setting.....	37
Arizona.....	38
Hawaii.....	38
Missouri.....	38
South Carolina.....	38
Tennessee.....	39
West Virginia.....	39
Variables.....	40
Predictor Variables.....	40
Referral Source.....	40
Race.....	40
Disability Status.....	40
Year.....	41
Outcome Variables.....	41
Disposition.....	41
Referral Source.....	42
Data Analysis.....	44
Research Question 1.....	47
Research Question 2.....	48
Research Question 3.....	49
Research Question 4.....	49
Research Question 5.....	49
CHAPTER IV: RESULTS.....	51
Research Question 1.....	51
Research Question 2.....	53
Arizona.....	53
Hawaii.....	54

Missouri.....	55
South Carolina.....	56
West Virginia.	58
Action.	59
Transfer.	60
Commit.....	61
Other.....	62
Research Question 3	63
Arizona.....	63
Hawaii.	63
Missouri.....	63
South Carolina.....	64
West Virginia.	64
Research Question 4.....	65
Research Question 5	66
Tennessee.	66
West Virginia.	66
CHAPTER V: DISCUSSION.....	68
Gun Free School Act/Zero Tolerance.....	68
School Resource Officers	69
Exclusionary Discipline.....	69
Referral Source	70
Year	72
Limitations	78
Recommendations for Practice.....	79
Recommendations for Future Research	82
Conclusions	83
<i>Appendix</i>	86
References	89

List of Tables

Tabel 2.1	21
Table 3.1	37
Table 3.2	43
Table 3.3	45
Table 4.1	51
Table 4.2	52
Table 4.3	54
Table 4.4	55
Table 4.5	56
Table 4.6	575
Table 4.7	759
Table 4.8	60
Table 4.9	61
Table 4.10	61
Table 4.11	62
Table 4.12	65
Table 4.13	65
Table 4.14	67
Table 4.15	67

List of Figures

Figure 1.1	12
Figure 1.2	14
Figure 2.1	32
Figure 4.1	52
Figure 4.2	52
Figure 5.1	74
Figure 5.2	74
Figure 5.3	75
Figure 5.4	75

List of Abbreviations

AZ	Arizona
GFSA	Gun Free School Act
HI	Hawaii
IDEA	Individuals with Disabilities Education Act
JCR	Juvenile court referral
MO	Missouri
NCES	National Center for Education Statistics
NCLB	No Child Left Behind Act
NJCDA	National Juvenile Court Data Archive
NSE	Not Special Education
OR	Odds Ratio
SBJCR	School-based juvenile court referral
SC	South Carolina
SE	Special Education
SRO	School Resource Officer
StPP	School-to-Prison Pipeline
TN	Tennessee
WV	West Virginia
ZT	Zero tolerance

CHAPTER 1: INTRODUCTION

School discipline is a perennial concern of parents, educators and policy makers. In recent years, policies and practices have changed dramatically. School shootings and gun violence have caused the prevention of school violence and disruption to be a major pursuit for school communities and societies across the United States (CEEP, 2004). School administrators, teachers, parents and other community members all agree that school safety and positive school climate are essential to productive and effective educational environments. However, there is controversy regarding how schools and communities should achieve the common goal of safe schools.

In an attempt to create safe learning environments that use effective discipline and encourage good instruction and citizenship, zero tolerance (ZT) policies have been implemented nationwide. Unfortunately, these policies have been executed and enforced inconsistently across the United States. In many schools, a “get tough” approach to school discipline has been introduced. Consequently, these policies have increased the risk of students being suspended, expelled and even arrested at school (Nocella, Parmar & Stovall, 2014). In some cases, school discipline and ZT policies are enforced regardless of the severity of the offense. Schools have also more readily relied on the police and juvenile courts to address discipline problems. Court involvement in school discipline is a source of controversy and concern for both the educational and juvenile justice communities. One of the most alarming issues has been referred to as the “School-to-Prison Pipeline (StPP)”, whereby students are referred to the juvenile courts for school related behavior and subsequently become ensnared in the juvenile justice system, a process associated with a host of negative outcomes.

This chapter will introduce the problem of exclusionary discipline and provide a brief overview of previous and current research to demonstrate recurrent issues in the area of school discipline (A list of terms and their definitions can be found in *Appendix A*). A summary of how schools across the United States respond to misbehavior will be presented followed by a definition and explanation of school-based juvenile court referrals. In addition, the intake process of SBJCRs will be explained. The chapter concludes with a description of the quantitative research study, as well as implications of the results.

School Discipline

Teachers and administrators have been responding to school discipline problems since the beginning of the public school system (Allman & Slate, 2011). In the mid to late 1800s, corporal punishment was widely used in schools. Forms of corporal punishment varied but included hitting students with tree branches and wooden paddles (Evolving Classroom, 2001). At the time, the threat of corporal punishment was thought to motivate students to behave while in school (Middleton, 2008). In 1977, the use of corporal punishment was supported by *Ingraham v. Wright*, a case in which the Supreme Court ruled that students could be paddled at school. Additionally, the ruling confirmed that paddling was not considered “cruel and unusual” punishment (Ingraham, 1977). However, not all education stakeholders agreed with the use of corporal punishment. In the 1960s, the use of exclusionary discipline, disciplinary measures removing students from the classroom and/or school settings, increased as an alternative to corporal punishment. Additional alternatives to corporal punishment included verbal reprimands and fines (Allman & Slate). Recently, various approaches to school discipline have been utilized across the United States.

The Purpose of School Discipline

Traditionally, school discipline has had four main purposes (Bear, 2008). First, to create a safe and orderly environment for all students. Second, to teach students how to develop self-discipline. Third, to facilitate a model of acceptable behaviors for students. Lastly, to deter students from demonstrating inappropriate behavior (Bear). The main goal of school discipline is to create a safe learning environment so that all students can learn to their fullest potential. Current disciplinary practices suggest that many schools across the U.S. may not be achieving this goal.

When examining historical and current school discipline data, it does not appear that students are benefiting from exclusionary school discipline policies. For example, in 1974 there were about 1.7 million suspensions of school-aged children in the United States. This involved approximately 3.7% of all students, (Fabelo et al., 2011). By 2006, there were 3.3 million students suspended, or approximately 7% of the population of public school students in the United States (Fabelo et al.). Federal legislation is suspected as a catalyst to this dramatic change in the use of school suspensions.

Legislation

In the 1990s, the passage of the federal Gun Free School Act (GFSA) had implications for school districts across the nation. Initially the GFSA was passed to prevent students from bringing guns to school. Under the legislation local schools could apply for government funding if they demonstrated that students who brought guns to school would be expelled for at least one year and referred to the justice system (Fabelo et al., 2011; Klehr, 2009). As the demand for safe schools persisted, ZT was adopted and expanded the GFSA to apply to any weapon brought to school (Fabelo et al.; Klehr). Students violating the GFSA would be removed from school for at least one year under

ZT policies regardless of the “intent” (Klehr). ZT policies were thus sanctioned to promoted safe school environments, deter serious misbehavior and comply with GFSA.

Zero Tolerance, or ZT, has been broadly defined as “the application of predetermined consequences, most often severe and punitive in nature, that are intended to be applied regardless of the gravity of behavior, mitigating circumstances, or situational context (American Psychological Association ZT Task Force, 2008, p. 852).” By adopting ZT policies, schools were hoping to remove the students who posed harm to others (Dunbar & Villarruel, 2004). In many districts, strict enforcement of these policies was modeled after practices used in criminal justice and led to suspension or expulsion of large numbers of students (Advancement Project, 2010).

By 1997, less than four years after the passage of the GFSA, approximately 79% of schools in the United States had adopted ZT policies regarding alcohol, drugs and violence (Fabelo et al., 2011). The specifics of these policies, such as the length and duration of suspensions, varied from state to state. However, the overall goal of ZT was to deter students from serious misbehavior and to increase school safety. Previous research has demonstrated that ZT policies frequently replaced the use of typical consequences for common school misbehavior (Project, 2010; Fabelo et al., 2011; Losen, 2011; Losen & Gillespie, 2012; Losen & Martinez, 2013; Morgan, Salomon, Plotkin & Cohen, 2014; Skiba & Knesting, 2002).

Today, there is no research-based evidence that ZT policies, when applied to non-violent behaviors, enhance school safety and improve student behavior (Klehr, 2009; Losen, 2011).

ZT policies have affected all schools in the United States, and the most notable impacts have been negative. The Secretary of Education recently commented that “Nationwide, as many as 95 percent of out-of-school suspensions are for non-violent misbehavior—like being disruptive, acting disrespectfully, tardiness, profanity and dress code violations (Duncan, 2014, p.1).” In addition, Secretary Duncan explained that exclusionary discipline has been applied disproportionately to African American students and students with disabilities.

Student Characteristics

A state’s interpretation of the GFSA mandate drives the execution of discipline policies in that state. A 2004 policy brief regarding ZT stated “Beyond federal policy on weapons possession, the consistency of implementation of ZT is so low as to make it unlikely that it could function effectively to improve school climate or safety” (CEEP, 2004). While each district’s understanding of statewide policies varies, nationwide there have been large disparities in the impact of these policies on minority students (Klehr, 2009). In a 2011 policy brief, researchers examined discipline practices using state and school district data. The data supported previous research findings that specific subgroups of students including youth with disabilities and African American students received a disproportionate number of exclusionary punishments (Losen, 2011).

Current racial disparities in school disciplinary practices are a relatively recent phenomena. In the 1970s there was a 3% difference in rates of suspension and other forms of discipline between African American and White students. In 2010, differential rates of suspension increased to more than 12%. Researchers have identified that African American students are consistently suspended at two times the rate of other students. In

addition, there appears to be an increase in disparity since the passage of the GFSA (CEEP, 2004). The gap between African American and White students suggests that one out of every seven African American secondary students is suspended at least once during the school year (Losen & Martinez, 2013). This finding was exacerbated for African American males. Numerous studies have confirmed disproportionate rates of exclusionary discipline for African American students. Consistent with the findings was the fact that African American students did not commit more serious offenses than other students (CEEP, 2004; Fabelo et. al, 2011). Racial bias has been suggested as possible contributor to the disproportionality of African American students receiving consequences of exclusionary discipline (Rudd, 2014). The idea that school administrators and teachers have lower expectations for African American students can result in exclusionary discipline being used more readily than with White students (Rudd). Ultimately, these factors lead to the conclusion that school disciplinary policies and practices across the country disproportionately affect African American students.

Students with disabilities are another group who have experienced a disproportionate impact from school discipline policies. Losen and Martinez (2013) identified that one in every five secondary students with disabilities (19%) was suspended during the 2009-2010 school year. This is nearly triple the rate of students without disabilities (6%). These statistics are disturbing, especially viewed in the context of Individuals with Disabilities Education Act (IDEA) of 2004. IDEA requires that states receiving federal funding provide students with disabilities an appropriate education in the least restrictive environment (LRE; IDEA, 2004).

A landmark study of disciplinary practices in Texas, *Breaking Schools' Rules*, that used all students in the public school system as the population, demonstrated that 45% of students suspended between seventh and twelfth grade had a documented disability. Nearly 75% of special education students in this study were suspended or expelled at some point between middle school and high school (Fabelo et al., 2011). Over half of the students identified as having emotional disturbances were suspended or expelled more than 11 times between seventh and twelfth grade. These statistics suggest that special education students may not be receiving the free appropriate public education (FAPE) mandated by IDEA. These disparities are even more pronounced when combining the two subgroups of African American students and students with disabilities. Losen and Martinez (2013) found that the national average of suspensions for the 2009-2010 school year for all students was 11%. Astonishingly, the rate for African American males with disabilities was 36% percent (Losen & Martinez). Education stakeholders often refer to the disproportionate rates for African American and special education students as “disparate impact.” This term sounds racially neutral on the surface, but in truth conceals discriminatory effects (Losen, 2011)

The high rate of suspension for students with disabilities brings to question whether or not education stakeholders are abiding by specific suspension requirements of IDEA. Currently, provisions of IDEA state that students with disabilities can only be suspended for up to ten days per school year (IDEA, 2004). IDEA mandates that if students require disciplinary removal longer than ten days that a manifestation determination meeting must be held to determine if the behavior was a manifestation of

the student's disability (Allman & Slate, 2012). Data regarding suspension of special education students suggests that these requirements are not being met.

Current Research

Research indicates that ZT policies have had an adverse impact on students in the United States. The Youth Risk Behavior Surveillance report (2013) indicates that since 1991, the percentage of students carrying weapons on school property, threatening or injuring with a weapon on school property, and involvement in a physical fight on school property have all decreased (US. Department of Health and Human Services, 2013). Yet, ZT policies continue to be enforced in schools across the Nation. In contrast, the number of students afraid to go to school because of safety concerns, 7.1%, has increased since 1993. This fear could be caused by the presence of SROs in schools and the emphasis on ZT policies. In addition, the severity of ZT policies has not just affected the school systems, but the juvenile justice system as well.

Schools have always provided discipline in classrooms and on school grounds. However, following the introduction of ZT and school resource officers (SROs), schools adopted a "get tough" approach to school discipline (Advancement Project, 2011). SROs are usually sworn in police officers employed by the local police department and assigned to patrol public schools full-time (Kim & Geronimo, 2009). SROs can also be security guards hired by the school district to patrol school grounds. Ideally, the addition of SROs in schools would help maintain a secure and safe environment for all students. However, the role of SROs is often not well defined and this has affected their utilization and the climate of schools (Kim & Geronimo).

Unclear parameters of SROs' roles in schools present many issues regarding school discipline. First, a lack of understanding of the SRO's position in a school could lead to school administrators and SROs violating the constitutional rights of students (Weiler & Cray, 2011). Second, the local police department's views of SROs could also affect the perception of the role of SROs, ultimately determining the success or failure of a SRO program. Lastly, SROs must be adequately trained on how to effectively work in schools and with students. Any unresolved issues between police departments, SROs and/or schools can affect the implementation and effectiveness of school discipline programs (Weiler & Cray).

Researchers have also suggested that SROs create a connection between public schools and juvenile courts (Krezmien, Leone, Zablocki & Wells, 2010). As a result, personnel in some schools have resorted to using juvenile courts to handle school misbehavior rather than managing behaviors through school disciplinary procedures (Krezmien et al., 2010).

Research has found that schools' overreliance on exclusionary discipline is counterproductive to students' academic success. For example, the *Breaking Schools' Rules* (2011) study in Texas found that 31% of students who were suspended or expelled from school were required to repeat a grade level at least once. Ten percent of those students dropped out of school (Fabelo et al., 2011). Researchers have also confirmed that dropping out of school increases the risk that youth will become involved in the juvenile and/or criminal justice systems (Losen & Martinez, 2013). The *Breaking Schools' Rules* study found that 23% of the students who received disciplinary actions became involved in the juvenile justice system (Fabelo et al.). The data supports that even

if schools were not the referring agency, there is a direct link between students who were involved in school disciplinary systems and current or future involvement in the juvenile justice system.

Schools' exclusionary discipline practices appear to be introducing students to the juvenile justice system at an early age. Students across the country have been referred to the juvenile courts for minor offenses occurring in school. Referrals to the juvenile courts have resulted from class disruption, low-value theft, and other acts that do not cause imminent threat to students' safety and do not involve weapons (Morgan et al., 2014). Students who are suspended or expelled from school often spend time unsupervised in the community where they encounter trouble (Fabelo et al., 2011). Consequently, many of these youth become involved in juvenile justice system. Research has proven that when youth make contact with the juvenile justice system at a young age, there is a greater likelihood that they will drop out of school. These youth also have recurring involvement with the juvenile and criminal court systems (Morgan et al., 2014).

The process through which youth are excluded from school and eventually become involved in the juvenile justice system is commonly referred to as the School-to-Prison Pipeline (StPP; ACLU, 2014). Research has demonstrated that the implementation of ZT policies has not been successful in deterring serious student misbehavior in schools. ZT and other harsh punitive measures used in schools, such as exclusionary discipline, school-based court referrals, and arrests, have become an integral part of the StPP (Fabelo et. al., 2011; Morgan et al., 2014, Losen, 2011; Losen & Martinez, 2013). These policies have increased the likelihood that students who misbehave will have contact with the juvenile justice system (Gonzalez, 2012). Each of these disciplinary

measures can have the same result for students: preventing children from the opportunity to learn within the walls of the school.

Krezmien, Leone & Wilson (2014) identified two different pathways to the StPP. Figure 1.1 represents both paths. Path 1 is modeled when schools participate in exclusionary disciplinary actions, such as suspension and expulsion (Krezmien et al.). Path 1 occurs when students are excluded from school resulting from disciplinary or academic issues. Consequently, this path can potentially introduce students to unproductive and/or illegal activities when not at school. The students are then susceptible to involvement in the juvenile justice system. Research demonstrates that once a student receives exclusionary discipline, the likelihood of high school graduation decreases and continues to decrease with each additional suspension or expulsion (Morgan et al., 2014). For example, a student with four suspensions has a greater chance of staying in school than a student with 12 suspensions. Suspended students then have more unstructured time resulting in the opportunity to engage in unproductive, delinquent activities such as trespassing and underage drinking. When exposed to negative peer influences, in addition to existing behavior problems at school, students' educational experiences can be severely jeopardized and a negative behavior cycle can occur. The pattern that occurs when students receive a School-Based Juvenile Court Referral (SBJCR) has been referred to as the cycle of inopportunity (James, 2011). The Texas *Breaking Schools' Rules* study found that out of the nearly one million students in the cohort they studied, about 46% were repeatedly involved in the schools' disciplinary systems. Additionally, 88% of those students subsequently became involved in the juvenile justice system (Fabelo et al., 2011). In summary, Path 1 can indirectly introduce

students to the juvenile justice system by removing them from school and eliminating a supervised and structured environment.

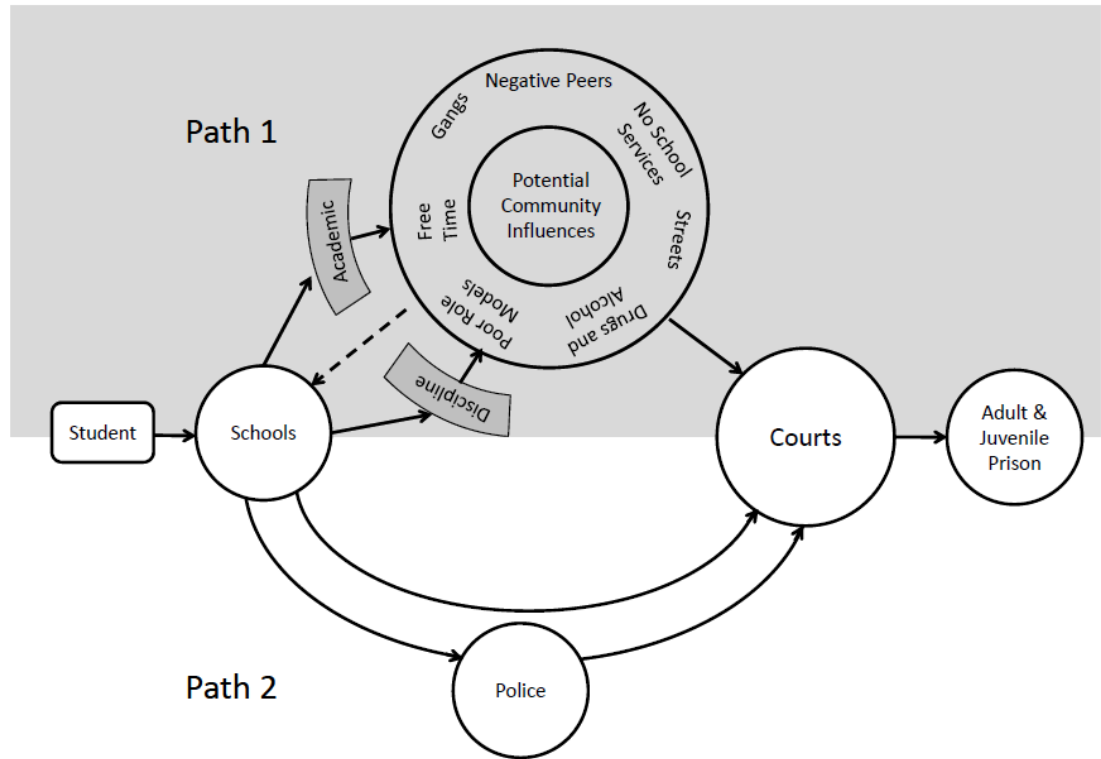


Figure 1.1. School to Prison Pathways. Adapted from Krezmien, M.P., Leone, P.E. and Wilson, M.G. (2014). Chapter 12: Marginalized students, school exclusions and the school to prison pipeline. In Wesley, T. Church II, Springer, D.W., & Roberts, A. R. (Eds.c), *Juvenile Justice Sourcebook*, 2nd ed., pp. 267-287. New York: Oxford University Press.

As shown in Figure 1.1, Path 2 in the StPP, identified by Krezmien and his colleagues (2014), is modeled when students are referred directly from school to the juvenile courts. A School-based Juvenile Court Referral (SBJCR) is a referral sent to the court system by a school official in response to inappropriate student behavior that is thought to be criminal activity (Krezmien et al., 2014). The student is then directly introduced to law enforcement, the courts and/or the juvenile justice system. After a youth receives a SBJCR there are many different outcomes used ranging from a decision as minor as dismissal of SBJCR to detention of a student in a juvenile correctional facility.

The steps taken after a youth is referred to the juvenile courts vary greatly from state to state. However, Figure 1.2 provides a general description of the SBJCR case process as described in the 2014 *School Discipline Consensus Report* (Morgan et al., 2014). When a SBJCR is filed with the juvenile courts there are numerous options that can be considered. As indicated by steps 1, 2, and 3 in Figure 1.2, there are three options that can ultimately end in a dismissal or diversion: intake, case review by prosecutor or judicial processing. Generally, a diversion occurs when the court suspends the complaint and refers the youth to a diversion program, such as teen court, and formal charges are not filed (Morgan, et al., 2014). In some cases during intake (1) the decision to hold the youth in pre-adjudication detention (4) can be made which ultimately skips the option of dismissal after the case is reviewed by the prosecutor. If the SBJCR is not dismissed or diverted at judicial processing (3), the youth is either sanctioned to residential placement (5), probation or other non-residential placement (6). Once the youth has fulfilled the terms of a residential sanction they re-entered into society (7).

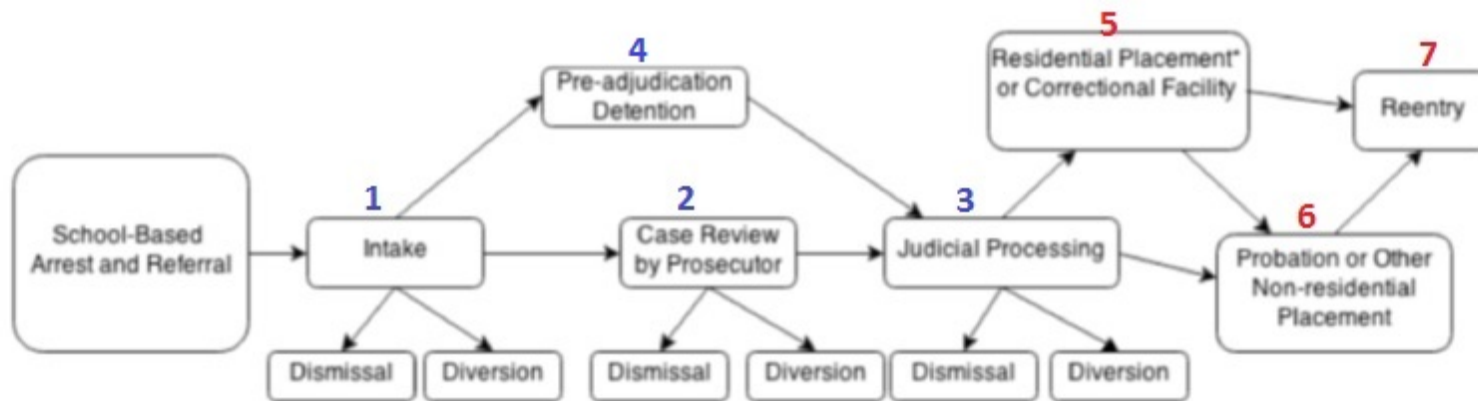


Figure 1.2. Generic process of school based referrals to the juvenile courts. Adapted from “The School Discipline Consensus Report: Strategies from the Field to Keep Students Engaged in School and Out of the Juvenile Justice System.” By the Council of State Governments (Morgan, Salomon, Plotkin & Cohen), 2014, p.274

Both paths identified by Krezmien, Leone & Wilson (2014) lead to the juvenile courts and affirm the framework of the StPP. Researchers have examined the nature of the relationship between schools and juvenile justice when referring to the StPP. Krezmien and his colleagues (2010) studied SBJCRs in Arizona, Hawaii, Missouri, South Carolina, and West Virginia, from 1995 to 2004. The researchers found that four of the five states had a greater proportion of SBJCRs in 2004 when compared to 1995. In addition, the researchers found that four of the states (AZ, HI, MO, WV) had an overall increase in the proportion of SBJCRs over the 10 year time span. South Carolina was the only state that produced a smaller proportion of SBJCRs during the period studied. However, the overall findings of this study indicated variability among the five states regarding the rates of SBJCRs. The cause of this variability remains undetermined. Krezmien et al. proposed further study of the school and jurisdiction-level factors. Additional examination might yield further understanding of the trends of SBJCRs over time.

Zero Tolerance policies, including direct referrals from schools to the juvenile courts, have been associated as contributing to the StPP for students across the United States. Research indicates that there is a disproportionate number of African American students and students with disabilities the juvenile justice system. However, researchers have not established a definitive link between the StPP and the characteristics of students referred to the juvenile court. In the absence of data, education stakeholders do not have direct evidence as to whether or not schools refer specific student subgroups to the juvenile court systems at a disproportionate rate. Further, an examination of SBJCRs could shed light on disproportionate sanctions and practices that contribute to the StPP.

Purpose

The purpose of this study was to further investigate the connection between schools and the juvenile court system, also known as the School to Prison Pipeline or StPP. The study is an extension of previous work by Krezmien et al. (2010). Using descriptive statistics, I compared the odds of receiving a SBJCR in 1995 and 2011 for each of the five original states analyzed by Krezmien et al. (2010). I also examined any change in these odds from 1995 to 2011. In addition, I determined whether SBJCRs were dismissed by the courts at a different rate than Juvenile Court Referrals (JCRs) from other sources for both 1995 and 2011. Using logistic regression, I investigated whether specific groups of students were more vulnerable to SBJCRs. I examined SBJCRs by Race in the five original states, Arizona, Hawaii, Missouri, South Carolina and West Virginia (AZ, HI, MO, SC, WV). I examined SBJCRs by Disability Status in one of the original states examined, WV, and an additional state, Tennessee (TN). Both states uniquely report disability status as part of each state's juvenile court data.

Data used for this study were obtained from the National Juvenile Court Data Archives (NJCDA) and National Center of Education Statistics (NCES). NJCDA maintains juvenile court data for 42 states and strives to provide empirical evidence regarding juvenile court operations to support policy and program development (NJCDA, 2014). NCES is a federal agency that collects and analyzes educational data in the United States (NCES, 2014). Utilizing both data sources allowed for a comparison of state juvenile court data to comprehensive, state education data.

Path 2 of the "Pathways from School to Prison" identified by Krezmien et al. (2014) was used as the framework for this study. An analysis of the characteristics of referred youth and the

outcome of the cases illuminated any important links in the StPP and examined the likelihood of SBJCRs for non-white students and students with disabilities.

The study allowed me to examine the disparate impact theory related to ZT implementation. Analyzing data from several states enabled me to study variability across jurisdictions based on the interpretation of ZT and the use of SBJCRs. Quantifying the rates of SBJCRs, as reported in this study, can assist educators and policy makers to understand the effects of SBJCRs and their impact on both minority students and students with disabilities.

Research Questions

The study reported here attempted to answer following research questions:

1. Based on the total student enrollment for each state, what is the likelihood of a student receiving a SBJCR in AZ, HI, MO, SC and WV? Is there a difference in the relative number of referrals in 1995 and in 2011?
2. Are SBJCRs more likely to be dismissed by the juvenile court system than referrals from other sources in AZ, HI, MO, SC and WV in 1995 and 2011? Do rates at which SBJCRs are dismissed differ by state and year?
3. Are non-white students more likely to receive a SBJCR than white students in AZ, HI, MO, SC, and WV in 1995 and 2011? Are there differences across states and years?
4. Based on the total number of SBJCRs, is there a difference in the likelihood of receiving a SBJCR for students with disabilities and students without disabilities in TN and WV in 2011?
5. Based on the total number of SBJCRs, are non- white students and students with disabilities more likely to have a SBJCR dismissed than students without disabilities in TN and WV?

CHAPTER II: LITERATURE REVIEW

In recent years, education stakeholders have focused on keeping students safe and making schools a place where all students can learn. This is, in part, in response to violent acts, such as school shootings that have been widely reported. In an attempt to keep schools safe, a ZT approach to weapons was adopted in the late 1990s. The implementation of these policies has inadvertently resulted in a blanket adoption of an inflexible set of punishments, often incongruent with the offenses committed (Kajs, 2006). Disciplinary exclusions, such as suspensions and expulsions, have routinely been used for minor infractions, such as dress code violations, rather than be reserved for the more serious matters for which ZT policies were intended (Losen & Martinez, 2013). Research shows that ZT policies have had a disproportionate impact on minority students and youth with disabilities. School officials' rigid and inflexible interpretations of national policies have created an unintended link between both African American students and students with disabilities who misbehave in school and the juvenile justice system.

The disproportionate representation of minority students and students with disabilities in the juvenile system is a major problem. Understanding the connection between schools and the juvenile justice system has become a priority for some researchers and policy makers. Disciplinary theories and policy implementations must be examined in order to determine how to address this problem.

This chapter first analyzes the literature on school disciplinary practices and the School-to-Prison Pipeline. The review is organized around four topics that previous research has identified as areas of study effecting school disciplinary practices: (a) zero tolerance, (b) exclusionary discipline, (c) disparate impact and (d) juvenile justice involvement and the School-

to-Prison Pipeline. A summary of the findings and methodological review of the studies are discussed. The chapter concludes with a synthesis of the literature with special attention to the use of the two pathways of the School-to-Prison Pipeline (StPP), discussed in the first chapter, as it relates to school discipline and juvenile court referrals.

Review of Literature

I selected peer reviewed articles, research reports and books for this review of literature review through an electronic search utilizing EBSCO, JSTOR, PsycINFO, and SAGE Reference Collection. I used the following key words to conduct the search: *school discipline, school misbehavior, exclusionary discipline, school to prison pipeline, juvenile justice system, school based disciplinary referrals, ZT, ZT policies, ZT interpretation, ZT implementation juvenile court referrals, and school crime* . I searched for articles between 1994 and 2015. I chose this 21 year time span because the GFSA, was implemented in 1994, which is believed to have contributed to the use of harsh discipline polices in schools. In addition, current school discipline practices are suspect to disproportionate representation. The search initially yielded 50 peer reviewed articles and six research reports and five books. After reviewing the abstract for each article, 30 manuscripts, six research reports, and three books related to the topic were reviewed carefully to determine if they met criteria for inclusion in this review. I then examined each piece of literature to determine if it met at least one of the following criteria: (a) published in a peer reviewed journal, (b) used quantitative and/or descriptive research procedures, and (c) examined or discussed school disciplinary procedures and the implications of those procedures.

I identified 11 peer-reviewed manuscripts and five reports providing research that met the inclusion criteria. I grouped the studies into four categories: (a) zero tolerance, (b) exclusionary

discipline, (c) disparate impact, and (d) juvenile justice and school-to-prison pipeline (See Table 2.1).

Table 2.1
Citation of References for Review of Literature and Description of Purpose

Citation	Purpose
Advancement Project, 2010	Provide an overview of zero tolerance and high-stakes testing have resulted in more punitive discipline being used in U.S. schools
Blake et al., 2011	Explore discipline experiences of African American females by examining disciplinary infractions and the consequences given to students in this minority group
Brown, 2012	Examine the effect of school policies on the educational experience of special education students
Casella, 2003	Explore the consequences of zero tolerance policies using qualitative methods
Fabelo, Thompson, Plotkin, Carmichael, Marchbanks & Booth, 2011	Describe the results and of an analysis school and juvenile justice data of the student population in Texas schools
Christle, Jolivet & Nelson, 2005	Examine school level factors that may contribute to youth delinquency using qualitative and quantitative methods
Dunbar & Villarruel, 2004	Examine the different interpretation and implementation of zero tolerance in demographically different districts using a policy analysis framework
Hoffman, 2014	Examine the effect of zero tolerance policies on minority students in urban areas
Kinsler, 2011	Examine the effect of student-teacher and student-principal race interactions for African American students
Krezmien et al., 2010	Examine school based referrals to juvenile courts in five different states
Losen, 2011	Explore the impact that suspension and racial disparity has on African American students and their families
Losen & Gillespie, 2012	Provide national and state level estimates regarding suspension of students in the United States
Losen & Martinez, 2013	Analyze the suspension rate of students during the 2009/2010 school year using a national sample
Nicholson-Crotty, Birchmeier & Valentine, 2009	Examine the impact that school discipline has on racial disproportion in the juvenile justice system
Teske, 2011	Examine a juvenile court's innovative multi-integrated systems approach related to adverse trends associated with Zero Tolerance
Vavrus & Cole, 2002	Examine the construction of disciplinary moments that led to the suspension of students in an urban setting using qualitative methods

Zero Tolerance

The authors of four studies analyzed ZT policies and their effect on students (Advancement Project, 2010; Dunbar & Villarruel, 2004; Hoffman, 2012; Casella, 2003). They found that the implementation and interpretation of ZT policies varied greatly between schools. Additionally, all studies found that ZT policies were not solely utilized to address major school crimes. The Advancement Project (2010) revealed that at local and state levels, ZT policies changed the cultures of schools allowing harsh disciplinary policies to develop. These policies were also found to punish students for behaviors that may be viewed as “age appropriate”, such as throwing a piece of food or cursing (Advancement Project). Dunbar and Villarruel (2004) reported that in Michigan, the implementation of ZT policies varied greatly by community. Urban communities were more likely to strictly enforce rules regarding firearms. Rural communities were more lenient, and in some cases allowed students to keep guns in their cars during hunting season. Casella found that punishment administered in response to ZT policies overwhelmingly impacted students who were already negatively affected by poverty, racism, academic failure or other challenges. Therefore, even when applying ZT policies consistently and without bias, the effects would not be the same for all students (Casella). Moreover, Hoffman noted that African American students were suspended and expelled at higher rates than members of other ethnic groups in the school district they studied.

Exclusionary Discipline

Four of the studies (Vavrus & Cole, 2002; Losen & Gillespie, 2012; Losen & Martinez, 2013; Brown, 2012) reviewed the effects of exclusionary discipline, especially suspension, on all students. It is important to note the differences in reporting among the four studies. Two of the studies reported each suspension (Vavrus & Cole, Brown), while the other two studies only reported each student’s first suspension. In other words, Losen & Gillespie and Losen &

Martinez did not report multiple suspensions per student which may have led to an underrepresentation of the impact of this exclusionary discipline practice. Losen and Martinez (2013) reviewed the suspension records from over 26,000 United States middle and high schools in the United States. Their effort revealed approximately one out of every nine secondary school students were suspended at least once during the 2009-2010 school year. The authors also reported that the use of suspension has increased each year since the 1970s.

Disparities were also apparent when looking at suspension rates across races (Losen & Martinez, 2013). Losen and Gillespie (2012) found that nationally, African American students were suspended 10% more often than white students. Vavrus and Cole (2002) examined the connection between race and exclusionary discipline using qualitative methods. The researchers confirmed that students' disruptive behaviors directly influenced the use of suspension. In addition, they noted that these patterns of behaviors were especially apparent in multicultural classrooms. The researchers also pointed out that a majority of the suspensions occurred because of non-violent behaviors.

Several studies reviewed in other sections of this chapter discussed suspension but it was not the primary focus of those authors' research (Blake et al., 2011; Fabelo et al., 2011; Losen, 2011; Christle, Jolivet & Nelson, 2010). Two studies (Christle et al., 2010; Losen, 2011) reported that suspension was linked to negative outcomes such as dropping out of school or an increased risk of mental and/or physical health problems. All authors found an over representation of specific ethnicities and student subgroups when examining exclusionary discipline (Brown, 2012; Blake et al.; Fabelo et al., 2011 ; Christle et al.; Losen). The disparate impact approach allows agencies to address intentional and/or implicit discrimination that may be hidden by current practices (Losen).

Disparate Impact

The authors of seven studies (Blake et al., 2011; Brown, 2012; Fabelo et al., 2011; Kinsler, 2011; Losen, 2011; Losen & Gillespie, 2012; Losen & Martinez, 2013) found that there was a disparate impact from disciplinary measures when looking at specific subgroups. Four of the studies noted disproportionate exclusionary discipline for male African American students. Losen (2011) found that along with the number of school suspensions growing steadily since the 1970s, racial disparities have also grown. During the 2006-2007 school year, the rate of suspensions for African American students was 15%. In 1973, this number was only 6% (Losen). The rate of suspensions for African American students has therefore doubled in slightly more than 30 years. Kinsler (2011) examined the discipline gap between white and African American students in North Carolina. He found that African American students were 7% more likely to receive suspension as a disciplinary consequence than white, same-age peers. In addition, the suspensions that African American students received were longer than those of their white counterparts (Kinsler). Similarly, Blake et al. (2011) found that black females were overrepresented as the recipients of exclusionary discipline. Their involvement in the school discipline process almost mirrored that of their male African American counterparts (Blake et al., 2011). The *Breaking Schools' Rules* study found that African American students were more likely than students of other races to be disciplined throughout middle and high school (Fabelo et al.).

Breaking Schools' Rules also found that students with disabilities were overrepresented in school discipline practices and that specific types of disability influenced disciplinary actions (Fabelo et al., 2011). Students labeled as emotionally disturbed, for example, had a greater likelihood of being suspended or expelled than a student with a learning disability (Fabelo et al.). Brown's study was unique in that it focused on both African American and Latino students, as

well as special education students, while looking specifically at the educational services provided within the protections of IDEA.

IDEA includes specific protections for students with disabilities regarding disciplinary actions. There are two specific situations in which it is illegal to remove a special education student from a public or private school. The first instance is when a negative behavior, though qualifying for disciplinary action, is a direct manifestation of a student's disability. The second, occurs if a school is not in compliance with a student's IEP when a behavior, qualifying for disciplinary action, occurs (IDEA, 2004; Brown, 2012).

Five studies examined disparities occurring for student with disabilities related to school discipline. Even with the federal legislation in place, researchers found that close to three out of four special education students were expelled at least once during their middle and high school years (Fabelo et al., 2011). Losen (2011) also reported that at least one school district in each of 46 states they studied used long-term suspensions for students with disabilities more often than nondisabled students. Nineteen percent of these states recognized that there were significant discrepancies regarding long-term suspensions for students with disabilities (Losen). The data also indicate that students with disabilities were often repeatedly suspended throughout the school year. Students with disabilities were more likely than their nondisabled peers to be suspended multiple times (Losen & Gillespie, 2012). When IDEA was reauthorized in 2004, it contained specific removal clauses that may account for the disproportionate number of students with disabilities being suspended and expelled from school, especially those who are Black and male (Brown, 2012). The law states that administrators can "consider any unique circumstances on a case by case basis" or when considering removing a student from school for egregious

behavior (IDEA, 2004). Consequently, schools have more discretion when applying the provisions of IDEA to discipline than prior to 2004.

When examining overall disparities regarding race and disability, Losen and Martinez (2013) found the largest discrepancies apply to black, male students with disabilities. Thirty-six percent of this population was suspended at least once during the 2009-2010 school year. This statistic was calculated using overall Disability Status (student with a disability or student without a disability) rather than by examining each specific disability (Losen & Martinez). The students who were disciplined using exclusionary practices were more likely to have contact with the juvenile justice system (Losen & Martinez).

Juvenile Justice Involvement and the School-to-Prison Pipeline

Five studies (Casella, 2003; Fabelo et al., 2011; Krezmien et al., 2010; Nicholson-Crotty, Birchmeier & Valentine, 2009; Teske, 2011) examined juvenile justice involvement and the StPP. Currently, schools have been identified as criminalizing school discipline (Church, Springer & Roberts, 2014). This manifestation has many causal factors. A link between schools and prisons was established a century ago through the introduction of truant officers (Casella). The implementation of ZT policies is believed to have strengthened that link. The *Breaking Schools' Rules* study found that 23% of students who were disciplined in school were also involved with the juvenile justice system (Fabelo et al.). Krezmien and colleagues (2010) examined the direct relationship between schools and the juvenile justice system. They noted that nearly one in every ten youth involved in the juvenile justice system in the five states they studied was referred to the juvenile courts by schools. In addition, the researchers found that girls were more likely to become involved with the juvenile justice system via school than from other

sources. This study demonstrated a direct link between schools and the juvenile justice system (Krezmien et al.). A common term used to describe this link is the “school-to-prison pipeline.”

Nicholson-Crotty, Birchmeier & Valentine (2009) suggested that the overrepresentation of exclusionary discipline among minority students in school is related to the over representation of minorities in the juvenile justice system. Krezmien et al., (2010) attempted to confirm this phenomenon by studying the extent to which schools refer students to the juvenile courts. The researchers sought to explain the relationship between the educational and legal systems. In addition, they suggested that specific student characteristics be examined in order to illuminate why certain subgroups, specifically African American students and students with disabilities, are overrepresented in the StPP (Krezmien et al., 2010).

After the increase of suspensions, expulsions and arrests caused by Zero Tolerance policies, Judge Steven Teske in Clayton County Georgia implemented a multi-integrated systems approach in hope of reversing the trends. The multi-integrated systems approach involved collaboration between four pre-existing systems: schools, juvenile courts, social services and mental health. Through this approach, two interventions were established: (a) School Reduction Referral Protocol and (b) Clayton County Collaborative Child Study Team (Teske, 2011). The two interventions implemented by Teske and colleagues successfully decreased the number of school-based juvenile court referrals by 67%. The interventions used distinguished the difference between misdemeanors and felonies occurring in the schools. Previously, SROs spent a majority of their time arresting students for low-level offenses. However, the two interventions used in Clayton County helped to significantly decrease this practice. In addition, the number of students detained for an offense occurring in schools were reduced by 86% (Teske). The results of this

case study demonstrated the reduction of the number of school-based referrals and arrests through collaboration of systems that often work independently of each other.

Summary of Findings

The research reviewed in this chapter highlights significant problems with the current systems of discipline in schools in the United States. This becomes especially problematic for students with recurrent behavior issues. Schools appear to be increasingly transferring students with problem behaviors to external settings or removing students from school without securing an alternative setting. Schools have either been referring students to the juvenile courts or utilizing suspensions and expulsions as disciplinary consequences under the guise of ZT policies. These practices keep students out of the school setting, depriving them of learning experiences as well as exacerbating their risks for negative life outcomes. African American students and special education students are most likely to get punished with various forms of exclusionary discipline, reflecting the over representation of certain demographic groups in the juvenile justice system. Relevant research suggests that the StPP is the outcome of the current state of policies and practices impacting punitive discipline both inside and outside of schools.

Methodological Review

The studies reviewed used a number of different research methods. This section evaluates (a) data collection and analysis, (b) threats to validity, and (c) limitations as applied to all studies included in the review.

Data Collection and Data Analysis

Sixteen studies were analyzed as part of the literature review: 11 quantitative, four qualitative and one mixed methods. Each study provided information regarding data collection and data analysis. However, some descriptions were very limited. When comparing data collection procedures to data analysis, in all cases, the data analysis components were more

detailed. All 11 quantitative studies used descriptive statistics. Some studies (Blake et al., 2011; Kinsler, 2011; Krezmien et al., 2010; Rodriguez, 2013; Way, 2011; Christle et al., 2010; Hoffman, 2012) used additional statistical measures such as odds ratio, and hierarchical linear modeling. The four qualitative studies followed the general qualitative research procedures outline in Cresswell's (2013) qualitative design textbook. In addition, Christle et al. utilized a mixed methods approach for their studies. After reviewing each study's data collection and analysis procedures, I evaluated for threats to validity.

Threats to Validity

Each of the empirical studies reviewed here had at least one threat to validity. The most common threat to validity was selection bias. Only five of the 16 studies did not have selection bias. These studies used national samples and one study examined a population rather than a sample. Most of the studies also had restricted generalizability. Again, only the studies using national samples did not have restricted generalizability. Another threat to validity that was fairly common to the group of studies I reviewed was mono-operation bias. The studies underrepresented the construct of interest and measured irrelevant constructs. The least common threats to validity I found while reviewing the studies were multiple treatment interactions, test/treatment interactions and violation of statistical assumptions. This is most likely because a majority of the studies did not use causal or inferential statistical analysis. The studies that did use causal or inferential statistical analysis typically had one treatment and employed descriptive statistics. The number of threats to validity found in the reviewed studies was minimal given the infinite possibility of threats to validity that occur when conducting research (Boudah, 2010).

Limitations

Seven of the studies (Advancement Project, 2011; Fabelo et al., 2011; Losen & Gillespie, 2012; Losen & Martinez, 2013; Nicholson-Crotty et al., 2009; Vavrus & Cole, 2002; Teske,

2011) did not disclose limitations. Of the 9 studies that did report limitations, lack of generalizability of the study was most frequently cited. Secondary was the limitation that the data used for the studies came from a secondhand source rather than being collected by the researchers. This was very common because many of the researchers obtained data from state departments of education or other government sources. One of the major limitations when researching school discipline is that most of the data comes directly from a secondhand source. School district disciplinary data is an example of data from a secondhand source provided to researchers to analyze.

Synthesis

The studies I reviewed examined disciplinary procedures and policies in schools, and how those policies impact students. A common finding amongst the studies was exclusionary discipline methods disproportionately affect students of minority groups, specifically African American students and special education students. There is enough rigorous research to support this conclusion. There are a limited number of studies, however, examining the link between discipline policies and subsequent juvenile justice involvement. The few studies that have examined the educational-legal system link indicate that there is disproportionate representation of minority students. There has not been enough research conducted on this topic to definitively conclude that this disproportionality is the result of school discipline policies alone.

The recent introduction of a nationwide discipline guidance package acknowledges that there are significant concerns about the way schools approach discipline. Secretary Duncan stated:

Positive discipline policies can help create safer learning environments without relying heavily on suspensions and expulsions. Schools also must understand their civil rights

obligations and avoid unfair disciplinary practices. We need to keep students in class where they can learn. These resources are a step in the right direction (U.S. Department of Education, 2014, p.1).

Although the discipline guidance package is a sign of progress, education stakeholders must not ignore the vulnerable children and youth whose educational rights are being violated because of current practices.

In order to understand the disproportionate representation of African American youth and special education students in the juvenile justice system, additional studies need to focus on SBJCRs. The outcome, or disposition, of the individual cases need to be recorded for researchers to analyze. This analysis must be done across multiple settings and states. There is a good deal of variability among and within states with regard to the interpretation and implementation of discipline policies (Krezmien et al., 2010). Therefore, no direct inferences can be made until the impact of SBJCRs is thoroughly studied.

Krezmien, Leone and Wilson (2014) identified two co-occurring pathways regarding the StPP (figure 3.1). Path 1 demonstrates an indirect link between schools and the juvenile courts system. This path is strengthened by suspensions and expulsions that remove students from school. Path 2 highlights a direct link between schools and the juvenile court system (Krezmien et al.). This path is occurs when a school representative indicates that a student has engaged in egregious behavior that needs addressed by the juvenile court system. Both paths are supported by the literature reviewed in this chapter.

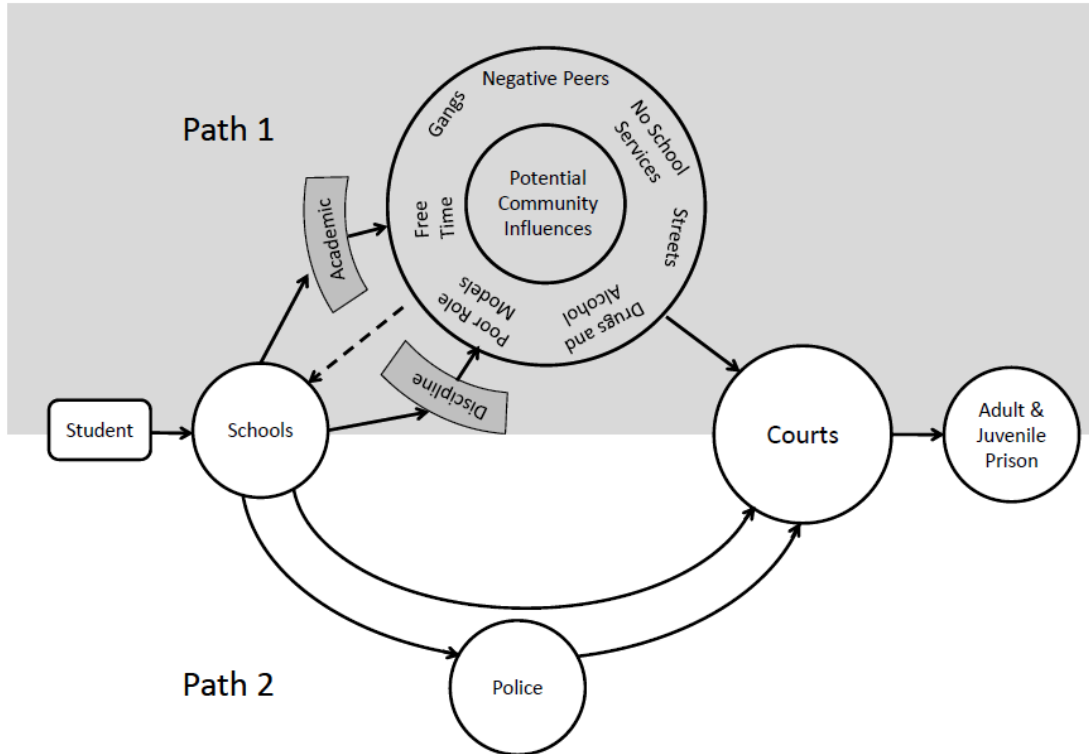


Figure 2.1. School to Prison Pathways. Adapted from Krezmien, M.P., Leone, P.E. and Wilson, M.G. (2014). Chapter 12: Marginalized students, school exclusions and the school to prison pipeline. In Wesley, T. Church II, Springer, D.W., & Roberts, A. R. (Eds.), Juvenile Justice Sourcebook, 2nd ed., pp. 267-287. New York: Oxford University Press.

It is worth noting that in response to SBJCRs and the overrepresentation of minority students, some juvenile courts have attempted to respond to SBJCRS differently than they have in the past. Based on previous patterns, Aull (2012) suggested that states create arbitral tribunals to serve as a check point for SBJCRs. Essentially, the tribunals would screen out unnecessary SBJCRS. In order to reduce Path 2 (Krezmien et al., 2014) of the StPP, schools must steer away from using the juvenile courts as a consequence for school-related misbehavior (Krezmien et al.). Whether that move must be mandated or voluntary has yet to be addressed.

In 2011, there were approximately 1.2 million delinquency cases referred to the United States juvenile courts (Hockenberry & Puzanchera, 2014). Identifying long term solutions to the overrepresentation of African American youth and students with disabilities in the juvenile justice system requires examining SBJCRs. As evidenced by Teske (2011) in Clayton County Georgia, a multi-system approach can be successful in reducing the number of school-based court referrals and arrests. However, this requires a collaborative effort. Additional research on the relationship between SBJCRs and juvenile court involvement will help education stakeholders identify the sources and/or pathways of youth into the juvenile justice system. This, in turn, should increase awareness of the inequitable ways in which ZT policies have been implemented by schools. Awareness and understanding of the current problems might then yield better policies, or better implementation of current policies in the future.

CHAPTER III: METHOD

The evidence clearly suggests that there is need to further examine the links between school disciplinary practices and the juvenile court system. This study examined one aspect of this link by analyzing school-based juvenile court referrals (SBJCRs) in several states. After restating the research questions, this chapter describes the methods used for this research study.

1. Based on the total student enrollment for each state, what is the likelihood of a student receiving a SBJCR in AZ, HI, MO, SC and WV? Is there a difference in the relative number of referrals in 1995 and in 2011?
2. Are SBJCRs more likely to be dismissed by the juvenile court system than referrals from other sources in AZ, HI, MO, SC and WV in 1995 and 2011? Do rates at which SBJCRs are dismissed differ by state and year?
3. Are non-white students more likely to receive a SBJCR than white students in AZ, HI, MO, SC, and WV in 1995 and 2011? Are there differences across states and years?
4. Based on the total number of SBJCRs, is there a difference in the likelihood of receiving a SBJCR for students with disabilities and students without disabilities in TN and WV in 2011?
5. Based on the total number of SBJCRs, are non- white students and students with disabilities more likely to have a SBJCR dismissed than students without disabilities in TN and WV?

Data Collection and Data Source

NJCDA. Juvenile court data used for this study were obtained from the National Juvenile Court Data Archives (NJCDA). NJCDA maintains juvenile court data for 42 states in the United States. NJCDA strives to provide empirical data regarding juvenile court statistics to support

policy and program development (NJCDA, 2014). States voluntarily choose to participate in the NJCDA by providing the database with data and the activities of the juvenile justice system in their jurisdiction. NJCDA collects data from states' client tracking systems. The archive provides detailed information regarding delinquency and status offences. Each state has a data collection system that captures extensive information on each case referred to the system. NJCDA maintains the data collected in each state. NJCDA takes the data provided by each state and cleans, organizes and compiles the data. By doing this, the NJCDA is able to provide meaningful information to juvenile justice professionals, policymakers, researchers and the public (NJCDA). Therefore, all data analyzed for this study were archival data because it has been collected by the states and then given to the NJCDA. The archive uses case-level data and court-level aggregate statistics (NCJJ, 2011).

Case-level Data. The case-level data are typically generated by automated client-tracking systems managed from the juvenile courts or other agencies. Case-level data includes the offence, age, gender and race of the youth. In addition, the case-level data provides the decision and disposition of each case (NCJJ, 2014). In this study the case-level data I examined were JCRs and SBJCRs, which were analyzed in context of disposition, race, and disability status.

Court-level Data. The court-level aggregate statistics are from annual reports provided by state and local courts. These data provide the counts of delinquency and status offences handled by the courts over specific time period (NCJJ, 2014). In order for court-level data to be used by the archive, the data must be in a compatible unit of count and demonstrate consistency over at least two years (NCJJ). Court-level data were reviewed to obtain the counts of delinquency in the juvenile courts of each state.

NCES. In addition to data provided by NJCDA, data collected from the National Center for Education Statistics (NCES) was utilized. NCES is a federal entity that collects and analyzes educational data from the United States and also other countries (NCES, 2014). NCES houses state education data profiles and contains information for each of the fifty states. The information provided in the state data profiles are categorized in six subgroups: (a) Elementary and Secondary Education Characteristics, (b) Elementary and Secondary Education Finance, (c) Postsecondary Education, (d) Demographics, (e) Public Libraries and (f) National Assessment of Educational Progress (NCES).

For this study, data from Elementary and Secondary Education Characteristics was used to determine the total school enrollment for each of the six states that were studied. It is important to note that the school enrollment data reports each student once. The data from Elementary and Secondary Education Characteristics is collected by the Common Core of Data (CCD) program. The CCD annually collects fiscal and non-fiscal data about all public schools, public school districts and state education agencies in the United States. The CCD utilizes five surveys which are sent to state education agencies. The data are then compiled by each state education agency and reported to the CCD (NCES, 2015). Each year, statistical information is collected in 50 states and the District of Columbia. Table 3.1 displays the total enrollment data for 1995 and 2011 of all states analyzed in this study (NCES, 1994-95/2010-11).

Table 3.1
Total Public School Enrollment for 1995 and 2011

State	1995	2011
AZ	621,535	1,083,348
HI	183,795	179,601
MO	878,541	918,710
PA	1,764,946	1,771,395
SC	548,725	725,838
TN	881,425	987,422
WV	310,511	282,879

Table 3.1 Total School Enrollment in 1995 and 2011. As reported by U.S. Department of Education, National Center for Education Statistics, Common Core Data (CCD), “State Nonfiscal Public Elementary/Secondary Education Survey.”

Subjects and Setting

The subjects for this study were all children and/or youth referred to the juvenile courts during 1995 and 2011 in Arizona, Hawaii, Missouri South Carolina, and West Virginia.

Additional subjects were the youth referred to the juvenile courts during 2011 in Tennessee. The data are reported by “case” and not by “youth”. Therefore, there is a possibility that a youth can be involved in more than one case throughout the year, which could inflate the results of the study. The data provided to NJCDA by each state is considered non-identifiable information. It was not possible, based on the data analyzed, to identify whether or not a youth was involved in more than one case.

Each state in the United States has different laws regarding the age of children and youth in the juvenile justice system (OJJDP, 2014). However, the age of majority is 18 years old across all states. For these reasons, clear descriptions of the definitions and regulations of each state examined in this study are provided below. All states participating in the study provide special education services consistent with federal regulations for IDEA.

Arizona. Children and youth ages eight thru 17, are served through the juvenile courts in Arizona (Judicial Branch of Arizona, 2014). All children and youth in the designated age range involved in the juvenile justice system in the state of Arizona during the years of 1995 and 2011 were used as participants for this study. Arizona consists of 15 counties and the juvenile courts of each county are responsible for serving all youth in the county. However, they all share the common mission “to fairly and impartially decide cases and administer justice through the comprehensive delivery of services to children and families, victims of crime and the community so that: children reach their full potential; victims of crime are restored; and families and the community function in the best interest of children (Judicial Branch of Arizona).” Arizona has a diverse population of youth involved in the juvenile courts.

Hawaii. The state of Hawaii considers children and youth under the age 18 as juveniles (HSJ, 2014). Hawaii Family Courts have exclusive original jurisdiction over juvenile courts (OJJDP HI, 2014). The Family Courts have four different circuits (O’ahu, Maui, Hawai’i and Kaua’i) that manage proceedings dealing with juvenile offenses (OJJDP HI). The Hawaii State Judiciary website states that children and youth commit status offenses when cutting class without permission from a parent or guardian and can be charged (HSJ, 2014).

Missouri. In Missouri, the Division of Youth Services (DYS) serves all youth, under the age 18, involved with the juvenile courts (MDYS, 2014). The mission statement of DHS is to “enable youth to fulfill their needs in a responsible manner within the context of and with respect for the needs of the family and the community (MDYS, 2014).” Missouri is home to a fairly diverse population of children and youth.

South Carolina. It is the mission of the South Carolina Department of Juvenile Justice (SCDJJ) to “protect the public and reclaim juveniles through prevention, community services,

education, and rehabilitative services in the least restrictive environment (SCDJJ, 2014).” The SCDJJ serves children and juveniles ages 16 years old or younger. The SCDJJ website states that juveniles typically enter South Carolina’s juvenile systems when they are referred by “a Solicitor or school (SCDJJ).” All children and youth in the designated age range that were involved in the juvenile justice system in the state of South Carolina during 1995 and 2011 were used as participants for this study. There are 46 counties in the state of South Carolina. All counties participate in the state’s juvenile justice system. However, only 43 of the 46 counties have a juvenile justice office residing in the county. South Carolina contains a diverse population of youth involved in the juvenile courts.

Tennessee. The Division of Juvenile Justice in the state of Tennessee serves children that have been referred to the juvenile courts (TN State Courts, 2015). The division provides services ranging from juvenile probation to secure residential placements. In Tennessee, youth ages 18 and under are served by the juvenile court system. There are 98 juvenile courts in the state of Tennessee and 109 juvenile court judges (TN State Courts). All children and youth served by the Tennessee Juvenile Courts during 1995 and 2011 were participants in this study.

West Virginia. Juveniles in the state of West Virginia are served through the Division of Juvenile Services (WVDJS). The WVDJS serves children and youth age 17 or younger. The mission statement of the WVDJS is “providing effective, beneficial services to youth in the Juvenile Justice System that promote positive development and accountability, while preserving community safety, and sustaining a work environment predicated upon principles of professionalism, with dignity and respect for all (WVDJS, 2014).” All children and youth in the designated age range that were involved in the juvenile justice system in West Virginia during 1995 and 2011 were used as participants for this study. The ethnicities of juveniles

served in West Virginia are mostly African American and White. West Virginia is not as demographically diverse as the other states in this study.

Variables

For this study, the predictor variables were Referral Source, Year and the specific student characteristics of Race and Disability Status. The outcome variables used in this study were Referral Source and Disposition. In addition, the year and state were used as control variables in analyses utilizing logistic regression.

Predictor Variables. The four predictor variables were: (a) Referral Source, (b) Race and (c) Disability Status, (d) Year.

Referral Source. In this study, Referral Source was a binomial variable. The dichotomous categorical predictor variable Referral Source was designated by “school” (school=1) or “no school” (no school = 0), where “school” was a referral from a school and “no school” represented a juvenile court referral from a source other than school. However in order to make the results easily understood, a referral from “no school” was abbreviated “JCR” with JCR representing a Juvenile Court Referral from a source other than the school. In addition, the abbreviation “SBJCR” represented a referral from a school.

Race. In this study, Race was a binomial variable. The dichotomous categorical predictor variable Race will be categorized by “white” (white=0) or “non-white” (non-white=1), where “white” refers to students with the designated race of Caucasian and/or white and “non-white” refers to all students with a designated race that is not white. Therefore, students identified as “African American”, “Latino” and “Asian” are categorized as “non-white”.

Disability Status. In this study, Disability Status was a binomial variable. The dichotomous categorical predictor variable was either “Not Special Education” represented by

NSE or “Special Education” represented as SE. (NSE = 0, SE = 1). Specific disabilities as categorized by IDEA were not referenced. The data collected from the states that reported disability status did not report specific diagnoses or disabilities.

Year. In this study, Year was a binomial variable. The dichotomous categorical predictor variable, Year, was either 1995 (0) or 2011 (1). The reference category was 1995 and represented all of the juvenile court cases during 1995. Similarly, 2011 represented all juvenile court cases during 2011.

Outcome Variables. The two outcome variables used in this study were Disposition and Referral Source.

Disposition. In this study, the outcome variable of Disposition was an ordinal variable categorized by five different ordinal levels: a) Dismiss (b) Action, (c) Transfer, (d) Commit, or (e) Other. A SBJCR that was reviewed by the court and did not result in a court action as the disposition was categorized as Dismiss (Dismiss = 0). It is important to note the difference between a SBJCR receiving a dismissal versus those classified as diversion, although for this study both dismissed and diverted referrals were categorized as Dismiss. Typically when a referral is “diverted” it indicates that the referral was not acted upon by court but instead was referred to a different program. For example, a student that started a physical fight could be diverted to a community based anger management therapy group. However, the referral would be classified as dismissed because the court did not take action on the SBJCR. Dismiss was the reference category for the outcome variable Disposition. A SBJCR that was reviewed by the juvenile courts and the court decided on a disposition involving some kind of court action was categorized as Action (Action = 1). A SBJCR that was reviewed by the court and resulted in a disposition involving transfer of the case to a different court or jurisdiction was considered

Transfer (Transfer = 2). A SBJCR that was reviewed by the court and resulted in commitment to a juvenile facility was considered Commit (Commit = 3). A SBJCR that was reviewed by the court and resulted in some other type of action not defined by the preceding four categories was considered as Other (Other = 4).

Referral Source. In this study, Referral Source was a binomial variable. The dichotomous categorical outcome variable Referral Source was designated by “school” (school=1) or “no school” (no school = 0), where “school” was a referral from a school and “no school” represented a juvenile court referral from a source other than school. However in order to make the results easily understood, a referral from “no school” was abbreviated “JCR” with JCR representing a Juvenile Court Referral from a source other than the school. In addition, the abbreviation “SBJCR” represented a referral from a school.

Table 3.2 provides a visual representation of the research questions, years, and states analyzed. In addition, the table identifies the data analysis method, predictor variable and outcome variable for each research question.

Table 3.2
Research Questions and Analyses

Research Question	Data Set		Year		States					Data Analysis	Predictor Variable	Outcome Variable
Q1	NJCDA	NCES	1995	2011	AZ	HI	MO	SC	WV	Descriptive	N/A	N/A
Q2	NJCDA		1995	2011	AZ	HI	MO	SC	WV	Logistic Regression	Referral Source Year	Disposition
Q3	NJCDA		1995	2011	AZ	HI	MO	SC	WV	Logistic Regression	Race Year	SBJCR Status
Q4	NJCDA		2011		TN			WV		Logistic Regression	Disability Status	SBJCR Status
Q5	NJCDA		2011		TN			WV		Logistic Regression	Disability Status Race	Disposition

Data Analysis

Preliminary data analysis involved cleaning and recoding the data to ensure consistency of variables across years, counties, states and data sets. The recoding of the data required an understanding of each states' variables. I carefully reviewed the data sets using the codebooks provided to NJCDA by the states. For states without any type of codebook (TN and WV), I carefully reviewed all policy manuals and reports that could aid in a thorough explanation of the codes. After establishing the meaning of the codes used for Race, Referral Source, Disposition, and Disability Status (TN and WV only), I recoded the predictor and outcome variables to fit the dichotomous categorical variables prescribed by the research questions. In AZ, for example, the code for a disposition was different in each of the 15 counties. Instead of having 15 different codes for the variable, I combined the variables to have only one code for each possible disposition (See Table 3.3). A sample of the results of the recoding are displayed in Table 3.3

Table 3.3
Preliminary Data Analysis: Recoding Data for All States

State	Race		Referral Source		Disposition				
	White (0)	Not White (1)	School (1)	Not School (0)	Dismissed (0)	Action (1)	Transfer (2)	Commit (3)	Other (4)
Arizona	<ul style="list-style-type: none"> • Anglo 	<ul style="list-style-type: none"> • Asian • Black • Hispanic • Native American • Other • Native Hawaiian/ • Pacific Islander 	<ul style="list-style-type: none"> • School • High school • Middle school • School district • Junior high school • Reservation schools 	<ul style="list-style-type: none"> • Sheriff's office • Police department • Department of public safety • County Juvenile Court • Out Of County Agencies • County Superior Court • County Attorney • Parent • Relative • Marshall's office • Juvenile court • Probation • Drug task force 	<ul style="list-style-type: none"> • Dismissed • Dismiss without prejudice • Adjusted • Withdrawn by referring agency • Dismissed with conditions • Acquitted • Terminate and close 	<ul style="list-style-type: none"> • Diversion • Probation • Record information only • State hospital • Adjusted non-diversion • Penalty only 	<ul style="list-style-type: none"> • Transfer other jurisdiction • Deferred to adult court • Transfer to adult court 	<ul style="list-style-type: none"> • Committed to ADJC • Continued award to ADJC • Returned to ADJC 	<ul style="list-style-type: none"> • Guilty/not Guilty: traffic court • Illegal alien • Fugitive
Hawaii	<ul style="list-style-type: none"> • Caucasian 	<ul style="list-style-type: none"> • American Indian • Black • Burmese • Chinese • East Indian • Filipino • Hawaiian • Hispanic • Indonesian • Japanese • Jamaican • Korean • Native Alaskan 	<ul style="list-style-type: none"> • Department of Education 	<ul style="list-style-type: none"> • District Court • Police department • Prosecuting attorney • Department of Attorney General • Department of transportation • Department of Health • Department of public safety • Family court • Military police 	<ul style="list-style-type: none"> • Dismissed • Petition: denied, withdrawn • Waived • Parental disposition • Acquitted • Decline of jurisdiction • <i>Nol prossed</i> • Released 	<ul style="list-style-type: none"> • Diversion • Case ordered to reopen • Reversed by Supreme Court • Petition: amended, sustained, granted 	<ul style="list-style-type: none"> • Transfer to another case • Transfer legal status • Change of venue • Remanded to HCYF • Transfer adjudication • Transfer disposition 	<ul style="list-style-type: none"> • Committed • Detention • Adjudicated • Incarcerated • Probation revoked 	<ul style="list-style-type: none"> • Other judicial term • Legal status • Death
Missouri	<ul style="list-style-type: none"> • White 	<ul style="list-style-type: none"> • Black • Hispanic • Amer. Indian • Oriental • Other 	<ul style="list-style-type: none"> • School personnel 	<ul style="list-style-type: none"> • Law enforcement • DMH • DFS • Private/public agency • Juvenile court • Victim • Parent/Relative • Police/sheriff 	<ul style="list-style-type: none"> • Formal/informal allegation not true • Formal/informal sustain motion to dismiss 	<ul style="list-style-type: none"> • Formal allegation true • Formal, sustain motion to dismiss for certification 	<ul style="list-style-type: none"> • In home services • Adjustment 	<ul style="list-style-type: none"> • Transfer to other juvenile court • Transfer to other agency 	<ul style="list-style-type: none"> • Formal allegation true, out of home placement

Table 3.3 (cont.)

State	Race		Referral Source		Disposition				
	White (0)	Not White (1)	School (1)	Not School (0)	Dismissed (0)	Action (1)	Transfer (2)	Commit (3)	Other (4)
South Carolina	<ul style="list-style-type: none"> • White 	<ul style="list-style-type: none"> • Indian • Asian • Black • Hispanic • Other 	<ul style="list-style-type: none"> • School 	<ul style="list-style-type: none"> • County police department • County Sheriff department • Parent • Neighbor 	<ul style="list-style-type: none"> • Dismissed • Acquitted • Denial of motion/waiver • Decline of jurisdiction 	<ul style="list-style-type: none"> • Probation • Community service • House arrest • Prosecute • Custody to other agency • Diversion • Restitution 	<ul style="list-style-type: none"> • Transferred to department of corrections • Transfer to other state 	<ul style="list-style-type: none"> • Committed • Detention • Determinate sentence • Indeterminate sentence 	<ul style="list-style-type: none"> • Emancipate
Tennessee	<ul style="list-style-type: none"> • White 	<ul style="list-style-type: none"> • African American • Native American • Asian • Mixed race 	<ul style="list-style-type: none"> • School 	<ul style="list-style-type: none"> • Law enforcement • Parents • Relatives • Self • Community service agency • Department of children services • District attorney • Court 	<ul style="list-style-type: none"> • <i>Nolle prosequi</i> • Dismissed • Retired 	<ul style="list-style-type: none"> • Complaint substantiated • Case held open 	<ul style="list-style-type: none"> • Transfer • Special proceeding 	<p>NOT APPLICABLE</p>	<ul style="list-style-type: none"> • Special proceeding • Other
West Virginia	<ul style="list-style-type: none"> • White 	<ul style="list-style-type: none"> • Black • Asian/Pacific Islander • Native American • Multi-racial 	<ul style="list-style-type: none"> • School 	<ul style="list-style-type: none"> • Parent • Law enforcement • Probation • Victim • DHHR 	<ul style="list-style-type: none"> • Case dismissed • Resolved • Closed/counseled 	<ul style="list-style-type: none"> • Monitor compliance • Community service • Fine/Restitution • Improvement period • DHHR • Probation • Home confinement • Mental health processing 	<ul style="list-style-type: none"> • Transferred to adult court 	<ul style="list-style-type: none"> • DJS custody 	<ul style="list-style-type: none"> • Other

After recoding the data, analyses using descriptive statistics and logistic regression were conducted. To answer the research questions, five different analyses took place. Statistical Package for the Social Sciences (SPSS) was the statistical software program used to conduct all analyses.

Research Question 1. Based on the total student enrollment for each state, what is the likelihood of a student receiving a SBJCR in AZ, HI, MO, SC and WV? Is there a difference in the relative number of referrals in 1995 and in 2011?

To answer Research Question 1, I began with the examination of the NJCDA data. I ran descriptive statistics for each state and both years, to determine the total number of JCRs and SBJCRs. Next, I acquired the total school enrollment for each state, both years, using the NCES data.

To obtain the ratio of JCRs to total school enrollment, the numerator was the number of JCRs and the denominator was the total school enrollment. The ratio was then converted into a percent to determine the likelihood of a student receiving a juvenile court referral. To determine the likelihood of a student receiving a SBJCR, a ratio was formed comparing the number of SBJCRs and JCRs for each state, both years. To obtain this ratio, the number of SBJCRs was the numerator and the number of JCRs was the denominator. The ratio was then converted into a percent to determine the likelihood of a student receiving a SBJCR based on all JCRs.

Logistic regression was used to answer Research Questions 2 through 5. Binary logistic regression allowed prediction of the probability of specific dependent categorical observations based on independent variables (Laerd Statistics, 2013). Rather than providing the predicted value of the dependent variable using linear regression, the use of logistic regression predicted

the probability of the dependent variable (Laerd, 2015). Logistic regression has four primary assumptions that must be examined when using logistic regression: (a) noncollinearity, (b) linearity, (c) independence of errors, (d) values of X are fixed (Lomax & Hahs-Vaughn). It is important to note that basic assumptions of logistic regression were tested for and reviewed throughout the data analysis process. The general logistic regression equation used for these analyses is shown in Equation 1. The odds ratio equation used is shown in Equation 2 (Lomax & Hahs-Vaughn, 2012). (1)

$$Odds(Y = 1) = e^{logit(Y)} = e^{\ln[Odds(Y=1)]} = e^{\alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_m X_m} = (e^\alpha)(e^{\beta_1 X_1})(e^{\beta_2 X_2}) \dots (e^{\beta_m X_m})$$

$$Odds (Y=1) = \frac{P(Y=1)}{1-P(Y=1)} \quad (2)$$

Research Question 2. Are SBJCRs more likely to be dismissed by the juvenile court system than referrals from other sources in AZ, HI, MO, SC and WV in 1995 and 2011? Do rates at which SBJCRs are dismissed differ by state and year?

To answer Research Question 2, a multinomial logistic regression model was originally used to determine the odds of the five dispositions when using Referral Source as the predictor variable. The odds of a dismissed disposition were calculated based on the Referral Source. Referral Source (JCR = 0, SBJCR = 1) was the dichotomous categorical predictor. The multinomial categorical outcome variable was Disposition (Dismiss = 0, Action = 1, Transfer = 2, Commit = 3, Other = 4). Year was a dichotomous categorical predictor variable as well (1995 = 0, 2011 = 1). However, due to missing data, binary logistic regression was implemented for all analyses with Dismiss as the reference category. Multinomial logistic regression essentially estimates the probability of specific outcomes using dummy variables when examining more than 2 ordinal variables (Laerd Statistics, 2013). However, because of the large number of

missing disposition data it was statistically appropriate to perform binary logistic regression analyses. This analysis was more appropriate than multinomial logistic regression as it provided less variability caused by the missing data.

Research Question 3. Are non-white students more likely to receive a SBJCR than white students in AZ, HI, MO, SC, and WV in 1995 and 2011? Are there differences across states and years?

To answer Research Question 3, binary logistic regression was used. The odds of receiving a JCR/SBJCR based on Race were calculated. Race was the dichotomous categorical predictor variable (white = 0, non-white = 1). The dichotomous categorical outcome variable was Referral Source (JCR = 0, SBJCR = 1).

Research Question 4. Based on the total number of SBJCRs, is there a difference in the likelihood of receiving a SBJCR for students with disabilities and students without disabilities in TN and WV in 2011?

To answer Research Question 4, binary logistic regression were used. The odds of receiving a JCR/SBJCR based on Disability Status was calculated. Disability Status was the dichotomous categorical predictor variable (NSE = 0, SE = 1). The dichotomous categorical outcome variable was Referral Source (JCR = 0, SBJCR = 1).

Research Question 5. Based on the total number of SBJCRs, are non- white students and students with disabilities more likely to have a SBJCR dismissed than students without disabilities in TN and WV?

To answer Research Question 5, multinomial logistic regression model was originally used. The likelihood of specific dispositions was determined based on Race and Disability

Status. The predictor variables Race and Disability Status were combined to create a new predictor variable expressing all possible combinations of Race and Disability Status: (a) non-white/NSE, (b) non-white/SE, (c) white/SE, (d) white/NSE. The variable white/NSE was used as the reference category for the predictor variable. Disposition was the ordinal outcome variable (Action = 0, Dismissed = 1, Transfer = 2, Commit = 3, Other = 4). Again, due to missing data, binary logistic regression was conducted for the outcome variable of disposition with Dismiss being the reference category. Binary logistic regression was deemed more appropriate than multinomial logistic regression as it provided less variability caused by the missing data.

CHAPTER IV: RESULTS

Descriptive statistics and logistic regression were used to answer the research questions.

Research Question 1

Research Question 1 involved an examination of youth receiving a SBJCR as compared to a JCR from another referral source to determine the likelihood of a student receiving a SBJCR during 1995 and 2011 in each state. Tables 4.1 and 4.2 display the results of the analysis. As supported by Figure 4.1, there was a significant decrease in the overall number of JCRs in each state from 1995 to 2011. The largest decrease occurred in AZ where the number of JCRs declined by over 24,000 cases in the 16-year period. However, as shown in Figure 4.2, there was an increase in the number of SBJCRs, for all states from 1995 to 2011. The most notable increase was in SC where the number of SBJCRs increased by more than 3,500 cases. Although there was a significant decrease in the number of JCRs during the 16 year period, the number of SBJCRs increased across all states. Therefore, the likelihood of a student receiving a SBJCR increased for all states from 1995 to 2011.

Table 4.1
Juvenile Court Referrals (JCRs) and State-wide School Enrollment Data

State	AZ		HI		MO		SC		WV	
Year	<u>1995</u>	<u>2011</u>	<u>1995</u>	<u>2011</u>	<u>1995</u>	<u>2011</u>	<u>1995</u>	<u>2011</u>	<u>1995</u>	<u>2011</u>
# of JCR	76,533	52,085	11,750	8,722	80,175	58,225	24,951	18,395	9,543	6,227
Total School Enrollment	737,424	1,071,751	183,795	179,601	878,541	918,710	648,725	725,838	282,879	310,511
Likelihood of JCR(%)	.103 (10%)	.048 (5%)	.063 (6%)	.048 (5%)	.091 (9%)	.063 (6%)	.038 (4%)	.025 (3%)	.033 (3%)	.02 (2%)

Table 4.2

Likelihood of a School-Based Juvenile Court Referral (SBJCR) Compared to Juvenile Court Referrals (JCRs) from Other Referral Sources

State	AZ		HI		MO		SC		WV	
Year	1995	2011	1995	2011	1995	2011	1995	2011	1995	2011
#of SBJCR	1,215	2,109	32	245	5,259	8,006	3,099	6,899	1,135	2,536
# of JCR	76,533	52,085	11,750	8,722	80,175	58,225	24,951	18,395	9,543	6,227
Likelihood of SBJCR	.02 (2%)	.04 (4%)	.002 (.3%)	.03 (3%)	.07 (7%)	.14 (14%)	.13 (13%)	.38 (38%)	.12 (12%)	.41 (41%)

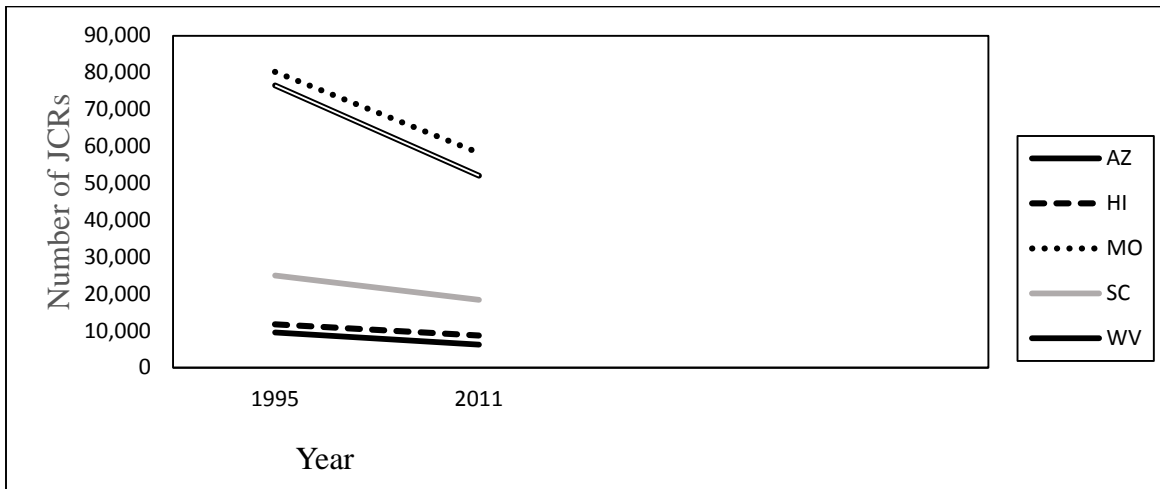


Figure 4.1. Number of Juvenile Court Referrals by State, 1995 & 2011

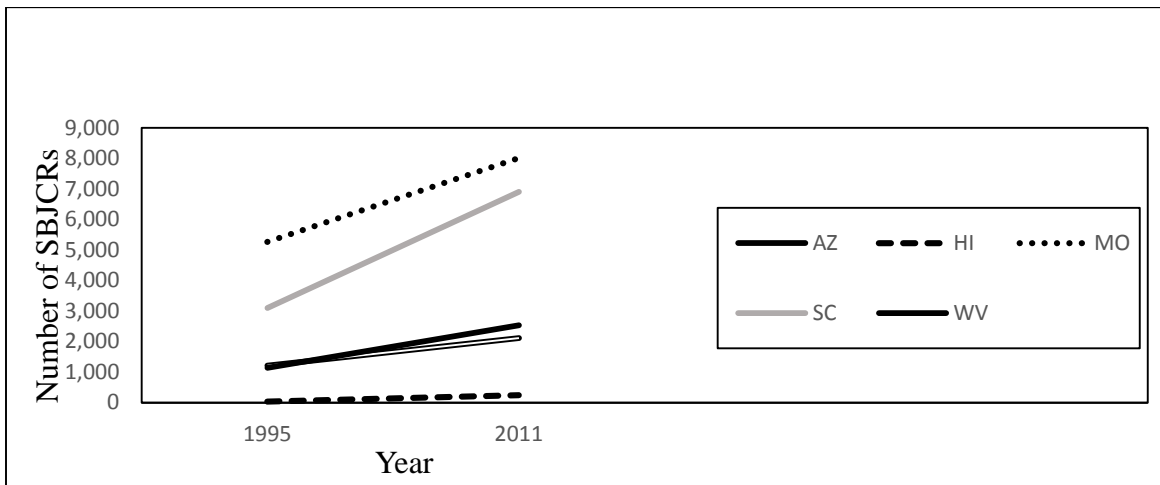


Figure 4.2. Number of School-based Juvenile Court Referrals by State, 1995 & 2011

Research Question 2

To answer Research Question 2, the likelihood of the five dispositions (Dismiss, Action, Transfer, Commit, Other) was examined and calculated for each state using Referral Source and Year as predictors. Specifically, the odds ratios (ORs) of specific dispositions were predicted using the referral source and year as predictors. When examining Referral Source (JCR = 0, SBJCR = 1), JCR was used as the reference group. The two years being examined were 1995 (0) and 2011 (1); 1995 was used as the reference group. The likelihood of a SBJCR receiving a specific disposition from the courts was determined. To accurately compare the dispositions within and across the states, I recoded the original dispositions into one of five dispositions used across all states. The five new codes created categorical variables: (a) Dismiss, (b) Action, (c) Transfer, (d) Committed, (e) Other. The disposition Dismiss served as the reference category for all analyses. The preexisting codes of “dismissed, adjusted or receiving no action and/or record” were categorized as Dismiss. Table 3.3 displays specific examples of the categorization and conversion of the original codes used by each state.

The results of Research Question 2 are first reported by state, then comparisons of results for each disposition are made across the five states. Two states had extremely large numbers of missing cases. This is considered random missing data as there was not pattern for the data loss (Williams, 2015). It is possible that the missing data affected the results for Research Question 2. In this study, all cases with missing data were dropped from the analyses.

Arizona. As displayed in Table 4.3, in AZ, all of the dispositions, excluding Commit, yielded statistically significant results. The odds ratio (OR) was significantly higher than 1.0 for the disposition Other. However, it was less likely for a case to receive the disposition Other in 2011 than in 1995. The ORs were significantly lower than 1.0 for the dispositions Action and

Transfer, indicating that for each one unit increase in Referral Source, the odds of the disposition Action, .085, or Transfer, .172, were multiplied by .50.

The data show that SBJCRs were more likely to be dismissed than any other disposition in AZ. Across all dispositions, the SBJCRs were significantly lower than 1.0 indicating a decrease in the likelihood of a SBJCR receiving the dispositions Action, Transfer, Commit and Other when compared to the reference category, Dismiss. The predictor Year produced an OR significantly greater than 1.0 for the disposition Action, meaning that a SBJCR was more likely to receive a disposition of Action in 2011 when compared to 1995. In contrast, all other dispositions produced ORs significantly less than 1.0, indicating that SBJCRs were less likely to receive the dispositions Transfer, Commit and Other in 2011 when compared to 1995.

Table 4.3
Research Question 2: Arizona Results

	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Source	-2.468	.083	<.001*	.085	.072-.100
	Year	.383	.014	<.001*	1.467	1.427-1.508
Transfer	Source	-1.757	.164	<.001*	.172	.125-.238
	Year	-.693	.031	<.001*	.50	.471-.532
Commit	Source	-18.379	802.399	.982	.000	.000
	Year	-.590	.037	<.001*	.554	.515-.596
Other	Source	.879	.052	<.001*	2.409	2.174-2.668
	Year	-1.554	.033	<.001*	.211	.198-.225

Hawaii. As reported by Table 4.4, Action was the only disposition that yielded statistically significant results. The OR of .007 indicated that for each one unit increase in Referral Source, the likelihood of a SBJCR receiving a disposition of Action was multiplied by .50. The OR for Action was significantly greater than 1.0. The OR of 1.58 indicated that for each one unit increase in Year, the OR increased by 1.58 demonstrating an increase in the likelihood of the disposition Action in 2011 than in 1995. Similarly, for each one unit increase in the year, the OR increased by 6.013. Indicating that it was more likely to have a disposition

Commit in 2011 than 1995. It is important to note that the *B* coefficients and standard errors for Transfer and Commit were extremely large. These large values indicated that very few of the cases analyzed had school as the referral source. Meaning that, most cases receiving a disposition of Transfer or Commit were JCRs and not SBJCRs.

SBJCRs were more likely to be dismissed than the dispositions Action, Transfer and Commit in HI. Across the three dispositions, the ORs for SBJCRs were significantly lower than 1.0 indicating a decrease in the likelihood of a SBJCR receiving the dispositions Action, Transfer, and Commit when compared to the reference category, Dismiss. However, HI was more likely to have a SBJCR receive the disposition Other than Dismiss. The predictor Year produced ORs significantly greater than 1.0 for the dispositions Action, Commit and Other, meaning that SBJCRs were more likely to receive the three dispositions in 2011 when compared to 1995. However, the disposition Transfer produced an OR significantly less than 1.0 indicating that a SBJCR was less likely to receive the disposition in 2011 when compared to 1995.

Table 4.4
Research Question 2: Hawaii Results

	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Source	-4.914	.713	<.001*	.007	.002-.030
	Year	.457	.035	<.001*	1.580	1.475-1.692
Transfer	Source	-18.734	3525.044	.996	.000	.000
	Year	-.089	.099	.368	.915	.753-1.111
Commit	Source	-18.303	3507.039	.996	.000	.000
	Year	1.794	.197	<.001*	6.013	4.089-8.845
Other	Source	.173	.125	.164	1.189	.932-1.518
	Year	.087	.041	.031	1.091	1.008-1.181

Missouri. MO was unique in that the state did not classify any cases as Other. Therefore, the disposition Other did not apply to this analysis. As displayed in Table 4.5, the dispositions Action, Transfer and Commit yielded statistically significant results for both predictors. The ORs for Referral Source, for all three dispositions, were significantly less than

1.0, indicating that for each one unit increase in Referral Source, the odds of receiving a SBJCR were multiplied by .50. The ORs relating to Year for each of the three dispositions were significantly higher than 1.0. Specifically, the ORs indicated that for each one unit increase in year the likelihood of the dispositions Action, Transfer and Commit increased by 1.016, 1.399 and 1.877, respectively.

SBJCRs were more likely to be dismissed than any other disposition in MO. Across the three dispositions analyzed, the ORs for SBJCRs were significantly lower than 1.0 indicating a decrease in the likelihood of a SBJCR receiving the dispositions Action, Transfer, and Commit when compared to the reference category, Dismiss. In addition, the predictor Year produced ORs significantly greater than 1.0 for the dispositions Action, Transfer and Commit. This indicated that in MO, a SBJCR was more likely to receive a disposition of Action, Transfer or Commit in 2011 when compared to 1995.

Table 4.5
Research Question 2: Missouri Results

	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Source	-.456	.035	<.001*	.634	.592-.679
	Year	.016	.020	.423	1.016	.977-1.056
Transfer	Source	-1.443	.046	<.001*	.236	.216-.258
	Year	.336	.017	<.001*	1.399	1.352-1.448
Commit	Source	-1.856	.058	<.001*	.156	.139-.175
	Year	.630	.019	<.001*	1.877	1.809-1.947

South Carolina. As displayed in Table 4.6, the dispositions Action and Commit yielded statistically significant results for SC. The OR for Action indicated that for each one unit increase in Referral Source, the likelihood of a SBJCR with the disposition Action increased by 1.390. In addition, for each one unit increase in Year, the likelihood of a SBJCR with the

disposition of Action increased by 5.021. In contrast, the OR for Commit indicated that for each one unit increase the likelihood of a SBJCR receiving the disposition Commit decreased by .495. However, for each one unit increase in Year, the likelihood of a SBJCR with the disposition Commit increased by 26.047. It is important to note that both predictors for the dispositions Transfer and Other did not yield statistically significant results. The *B* coefficients and standard errors were extremely large indicating that the number of cases with those dispositions was fairly low in frequency. In addition, SC had an extremely large amount of missing data for the predictor category disposition. Out of a total of 10,624 referrals in 2011, almost 60% (7,771) of the cases were missing.

SBJCRs were more likely to be dismissed than receive the disposition Commit in SC. The disposition produced an OR significantly lower than 1.0 indicating a decrease in the likelihood of a SBJCR receiving the dispositions Commit when compared to the reference category, Dismiss. In contrast, the dispositions Action and Other produced ORs significantly greater than 1.0. In SC, a SBJCR was more likely to receive a disposition of Action or Other than Dismiss. The predictor Year produced ORs significantly greater than 1.0 for the dispositions Action and Commit, meaning that a SBJCR was more likely to receive a disposition of Action or Commit in 2011 when compared to 1995.

Table 4.6
Research Question 2: South Carolina Results

	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Source	.329	.038	<.001*	1.390	1.291-1.496
	Year	1.614	.046	<.001*	5.021	4.591-5.491
Transfer	Source	-16.954	1142.884	.988	.000	.000
	Year	-16.692	1542.235	.991	.000	.000
Commit	Source	-.703	.081	<.001*	.495	.423-.580
	Year	3.260	.061	<.001*	26.047	23.125-29.337
Other	Source	1.769	.587	.003	5.864	1.858-18.512
	Year	-15.018	1565.473	.992	.000	.000

West Virginia. As displayed in Table 4.7, Action was the only disposition to yield statistically significant results in WV. The ORs for both predictors were significantly larger than 1.0, indicating that with each one unit increase in Referral Source and Year the likelihood of a SBJCR receiving the disposition Action increased by 1.515 and 6.845, respectively. The only other predictor to indicate statistically significant results was Year for the disposition Transfer. The OR indicated that for each one unit increase in Year, the likelihood of a SBJCR receiving the disposition Transfer increased by 4.957. However, for Referral Source, the disposition Transfer did not yield statistically significant results. The disposition Commit had extremely large *B* coefficients and standard errors suggesting few SBJCRs with the disposition Commit. In addition, although the results for Other were not statistically significant, the *B* coefficient and standard error for Year were extremely large, again indicating very few SBJCRs in 2011 with the disposition Other. In addition, WV had an extremely large number of missing data for the predictor category disposition. Out of a total of 3,312 in 2011, 2,915 (53%) cases were missing.

Other was the only disposition more likely to have a SBJCR receive the disposition Dismiss in WV. The OR for the disposition Other was significantly lower than 1.0 indicating a decrease in the likelihood that a SBJCR would receive the disposition Other when compared to the reference category, Dismiss. In contrast, the disposition Action produced an OR significantly greater than 1.0 indicating an increase in the likelihood that a SBJCR would receive the disposition Action when compared to the reference category, Dismiss. The predictor Year produced ORs significantly greater than 1.0 for the dispositions Action and Transfer, meaning that a SBJCR was more likely to receive a disposition of Action or Transfer in 2011 when compared to 1995.

Table 4.7
Research Question 2: West Virginia Results

	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Source	.415	.055	<.001*	1.515	1.360-1.688
	Year	1.923	.050	<.001*	6.845	6.260-7.550
Transfer	Source	-16.206	1309.117	.990	.000	.000
	Year	1.601	.365	<.001*	4.957	2.426-10.129
Commit	Source	-17.358	1116.926	.988	.000	.000
	Year	19.288	481.921	.968	238081230.790	.000
Other	Source	-.064	.411	.877	.938	.419-2.099
	Year	18.252	490.367	.970	84455126.274	.000

To ensure valid results for each state, the analyses were conducted using binary logistic regression. Although “disposition” was a multinomial outcome variable, issues with specific state datasets did not allow for an accurate multinomial logistic regression to take place. Specifically, the 2011 data for SC and WV were problematic in this analysis. Both datasets contained extremely large numbers of cases missing data case outcomes (dispositions). SC had 10,624 dispositions missing which was nearly 58% of the total number of cases. WV was missing 1,003 dispositions which was approximately 16% of the cases. Therefore, it is difficult to ensure accurate results because of the large quantities of missing data. In attempt to calculate the most accurate results, binary logistic regressions were run for all states to allow for comparable results across all states. Dismiss was used as the reference category since it was the most frequent outcome for most states.

To allow for the comparison for results across states, the results are described below by dispositions. The disposition Dismiss was used as the reference category across all dispositions.

Action. As displayed in Table 4.8, all five states yielded statistically significant results for the disposition Action. However, only SC and WV produced ORs significantly great than 1.0. This indicates that in SC and WV for one unit increase in Referral Source, the likelihood of a SBJCR with the disposition Action increased by 1.390 and 1.515, respectively. In addition, for

each one unit increase in Year the odds of a SBJCR receiving the disposition Action increased by 5.021 in SC and 6.845 in WV.

In contrast, AZ, HI and MO all yielded ORs significantly lower than 1.0, indicating that for each one unit increase in the disposition Action, the odds of a SBJCR receiving the disposition action were multiplied by .50 and therefore decreased by .085, .007, and .634 respectively. However, similar to SC and WV, for each one unit increase in year the ORs of a SBJCR having the disposition Action increased. The likelihood of AZ, HI and MO receiving SBJCRS with the disposition Action increased by 1.467, 1.580 and 1.016 respectively.

Table 4.8
Research Question 2: Action Results

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
AZ	Source	-2.468	.083	<.001*	.085	.072-.100
	Year	.383	.014	<.001*	1.467	1.427-1.508
HI	Source	-4.914	.713	<.001*	.007	.002-.030
	Year	.457	.035	<.001*	1.580	1.475-1.692
MO	Source	-.456	.035	<.001*	.634	.592-.679
	Year	.016	.020	.423	1.016	.977-1.056
SC	Source	.329	.038	<.001*	1.390	1.291-1.496
	Year	1.614	.046	<.001*	5.021	4.591-5.491
WV	Source	.415	.055	<.001*	1.515	1.360-1.688
	Year	1.923	.050	<.001*	6.845	6.260-7.550

Transfer. As displayed in Table 4.9, AZ, MO and WV were the only states to yield statistically significant results for the disposition Transfer. However, only AZ and MO yielded statistically significant results for Referral Source. The ORs for both states' likelihood of a SBJCR receiving the disposition Transfer were significantly less than 1.0. Therefore, for each one unit increase in Referral Source, the likelihood of the disposition Transfer was multiplied by .50 and decreased by .172 for AZ and by .236, for MO. All three states yielded statistically significant results for the predictor Year. MO and WV had results significantly higher than 1.0,

meaning that for each unit increase in Year, the likelihood of a SBJCR increased from 1995 to 2011 by 1.399 and 4.957, respectively.

Table 4.9
Research Question 2: Transfer

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
AZ	Source	-1.757	.164	<.001*	.172	.125-.238
	Year	-.693	.031	<.001*	.50	.471-.532
MO	Source	-1.443	.046	<.001*	.236	.216-.258
	Year	.336	.017	<.001*	1.399	1.352-1.448
WV	Source	-16.206	1309.117	.990	.000	.000
	Year	1.601	.365	<.001*	4.957	2.426-10.129

Commit. As displayed in Table 4.10, AZ, HI, MO and SC yielded statistically significant results for the disposition Commit. MO and SC yielded significant results less than 1.0 for Referral Source. The odds of a SBJCR receiving the disposition Commit were multiplied by .50 and therefore decreased by .156 for MO and .495 for SC. All four states yielded statistically significant results with Year as the predictor. HI, MO and SC had ORs significantly higher than 1.0. For each one unit increase in Year, the likelihood of a SBJCR with the disposition Commit from 1995 to 2011 increased by 6.013, 1.877 and 26.047, respectively. AZ was the only state with an OR significantly lower than 1.0 meaning that for each one unit increase in year, the OR, .554, of a SBJCR receiving the disposition Commit was multiplied by .50.

Table 4.10
Research Question 2: Commit

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
AZ	Source	-18.379	802.399	.982	.000	.000
	Year	-.590	.037	<.001*	.554	.515-.596
HI	Source	-18.303	3507.039	.996	.000	.000
	Year	1.794	.197	<.001*	6.013	4.089-8.845
MO	Source	-1.856	.058	<.001*	.156	.139-.175
	Year	.630	.019	<.001*	1.877	1.809-1.947
SC	Source	-.703	.081	<.001*	.495	.423-.580
	Year	3.260	.061	<.001*	26.047	23.125-29.337

Other. As displayed in Table 4.11, the only state to yield statistically significant results for the disposition Other was AZ. The OR for Referral Source was 2.409 meaning that for each one unit increase, the likelihood of a SBJCR receiving a disposition Commit increased by 2.409. In contrast, the OR for year was .211 indicating that for each one unit increase in year, the likelihood of a SBJCR receiving the disposition Commit was multiplied by .50.

Table 4.11
Research Question 2: Other

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
AZ	Source	.879	.052	<.001*	2.409	2.174-2.668
	Year	-1.554	.033	<.001*	.211	.198-.225

In summary, the results for Research Question 2 varied greatly across dispositions and states. However, general conclusions can be made based on the results. First, AZ was the only state to produce statistically significant results across all dispositions. However, there was no consistency regarding the impact of the predictors within the state. For example, there did not appear to be any patterns that would cause and increase or decrease across the four dispositions. Second, HI only produced statistically significant results for the dispositions Action and Commit. For both dispositions, the predictor Referral Source produced ORs significantly less than 1.0, while the predictor Year produced ORs significantly greater than 1.0. Third, SC and WV consistently produced ORs significantly higher than 1.0 for the predictor Year. These values indicate that the likelihood of the disposition Dismiss decreased from 1995 to 2011 in SC and WV.

Although the dispositions were recoded into five common dispositions across all states, there was great variability across the original dispositions for each state. For example in AZ, the original code of “acquitted” was recoded as “dismiss”. In HI, the disposition “parental disposition” was also recoded as “dismiss.” The two original dispositions had extremely different

meanings but were recoded into the same disposition in attempt to categorize the dispositions as accurately as possible. As a result, the recoding of dispositions may not be consistent across the five states. This limitation must be considered when reviewing the results for Research Question 2.

Research Question 3

To answer Research Question 3, the analysis examined the likelihood of a student receiving a SBJCR based on race (white = 0, non-white =1) and year (1995=0, 2011=1). Table 4.12 displays the statistical components of each analysis by state for the predictors of Race and Year.

Arizona. Statistically significant results for AZ occurred for both of the predictors. In addition, both predictors were associated with ORs significantly higher than 1.0. The results indicated that for each one unit increase in Race and Year, the likelihood of a SBJCR increased by 2.675 and 2.616, respectively.

Hawaii. In contrast, only HI produced an OR significantly greater than 1.0 for Year. The results indicated that for each one unit increase in Year, the likelihood of a SBJCR increased by 7.298 from 1995 to 2011. However, the predictor Race did not produce statistically significant results. It is important to note that when recoding Race in HI, there were many different ethnicities coded as “non-white” when compared to “white.” The large number of ethnicities considered “non-white” could have affected the results for the predictor Race in the state of HI.

Missouri. In MO, the predictor Race produced statistically significant results significantly less than 1.0. The OR of .496 for Race indicates that for each one unit increase the likelihood of a SBJCR was multiplied by .50. These results indicate that non-white students were less likely to receive a SBJCR than their white peers. However, the predictor Year

produced statistically significant results greater than 1.0 in the state of MO. The OR indicates that for each one unit increase in Year, the likelihood of a SBJCR increased by 2.218.

South Carolina. Similar to MO, in SC the predictor Race produced statistically significant results significantly less than 1.0, while Year produced statistically significant results greater than 1.0. The OR .771 indicated that for each one unit increase in Race, the likelihood of a SBJCR was multiplied by .50. In contrast, the OR 4.260 indicated that for each one unit increase in Year the likelihood of a SBJCR increased by 4.260

West Virginia. In WV, the predictor Race produced statistically significant results significantly less than 1.0, while Year produced statistically significant results greater than 1.0. The OR .430 indicated that for each one unit increase in Race, the likelihood of a SBJCR was multiplied by .50. In contrast, the OR 5.066 indicated that for each one unit increase in Year the likelihood of a SBJCR increased by 4.260 and 5.066 respectively.

In summary, Year was associated with increased likelihood of a SBJCR across all states, meaning that cases were more likely to receive a SBJCR in 2011 when compared to 1995. These results also support the results from Research Question 1. The results for the predictor Race varied by state. However, HI was the only state that did not yield statistically significant results for the predictor. White students in AZ, MO, SC and WV were more likely to receive a SBJCR than their Non-white students were more likely to receive a SBJCR than white students only in AZ. In contrast, White students were more likely than their non-white peers to receive a SBJCR in MO, SC and WV.

Table 4.12
Research Question 3: Results

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
AZ	Race	.984	.054	<.001*	2.675	2.404-2.975
	Year	.962	.036	<.001*	2.616	2.436-2.810
HI	Race	.511	.224	.022	1.668	1.075-2.587
	Year	1.987	.195	<.001*	7.298	4.980-10.681
MO	Race	-.701	.023	<.001*	.496	.474-.519
	Year	.797	.019	<.001*	2.218	2.138-2.301
SC	Race	-.261	.024	<.001*	.771	.735-.808
	Year	1.449	.025	<.001*	4.260	4.060-4.470
WV	Race	-.843	.070	<.001*	.430	.375-.493
	Year	1.623	.041	<.001*	5.066	4.672-5.492

Research Question 4

To answer Research Question 4, the analysis determined the likelihood of a student receiving a SBJCR or JCR based on Disability Status in TN and WV in 2011 (NSE = 0, SE = 1). As displayed in table 4.13, both states produced statistically significant results indicating that Disability Status was a significant predictor of receiving a SBJCR. The OR for TN was 1.360, indicating that for each one unit increase in Disability Status, the likelihood of a SBJCR increased by 1.360. Similarly, the OR for WV was 1.213, indicating that for each one unit increase in Disability Status, the likelihood of a SBJCR increased by 1.213. The results indicated that for both states, special education students had increased odds of receiving a SBJCR when compared to their regular education (NSE) peers.

Table 4.13
Research Question 4: Results

State	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
TN	Disability Status	.308	.043	<.001*	1.360	1.251-1.479
WV	Disability Status	.193	.108	.073	1.213	.982-1499

Research Question 5

Analysis 5 examined the likelihood of receiving a SBJCR or JCR with Race and Disability Status combined as one multinomial predictor. Referral Source (0 = no school, 1 = school) was used as a dichotomous predictor. The multinomial outcome variable in the analysis was disposition (Dismiss = 0, Action = 1, Transfer = 2, Commit = 3, Other = 4) with Dismiss as the reference category. The analyses were conducted for the only two states that reported Disability Status, TN and WV. Due to complications with the WV data set, each analysis was run using a binary logistic regression model. The reference category used for the predictor variable was white, NSE Dismiss was used as the reference category for the outcome variable.

Tennessee. As displayed in Table 4.14, TN only produced statistically significant results for the dispositions Commit and Other, for non-white/NSE. The ORs for both dispositions were significantly lower than 1.0. In TN the OR .492 indicated that for each one unit increase in disposition, the likelihood of non-white/NSE students to receive the disposition Commit was multiplied by .50. Similarly, the OR of .505 indicated that for each one unit increase, the likelihood of non-white/NSE students to receive the disposition Other was multiplied by .50. In other words, when compared to the reference group of white/NSE the likelihood of non-white/NSE students to receive a disposition of Commit or Other was decreased.

West Virginia. As displayed in Table 4.15, the only predictor to produce statistically significant results was again non-white/NSE. However, Action was the only disposition to yield statistically significant results. The OR, .177, for Action was significantly lower than 1.0 which indicated that for each one unit increase, the likelihood of non-white/NSE students to receive the disposition Action was multiplied by .50. Therefore, when compared to the reference category of white/NSE the likelihood of non-white/NSE students to receive the disposition Action was

decreased. The dispositions Transfer and Commit did not produce any results for this analysis as there were too few cases to conduct the analysis.

In summary, the results for both states indicated that when combined, Race and Disability Status are not significant predictors of SBJCRs receiving the disposition Dismiss. It is important to note that the variability of the data and original coding may have influenced the results of the analysis.

Table 4.14
Research Question 5: Tennessee

Disposition	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Non-White/NSE	-.137	.061	.024	.872	.774-982
	White/SE	.336	.149	.025	1.399	1.044-1.876
	Non-white/SE	-.292	.209	.161	.746	.496-1.124
Transfer	Non-White/NSE	.194	1.226	.874	1.215	.110-13.425
	White/SE	2.372	1.232	.054	10.714	.957-119.934
	Non-white/SE	-14.806	7105.180	.998	.000	.000
Commit	Non-White/NSE	-.708	.114	.000	.492	.394-.616
	White/SE	.353	.215	.100	1.424	.935-2.168
	Non-white/SE	-.186	.333	.577	.830	.433-1.594
Other	Non-White/NSE	-.684	.080	.000	.505	.432-.590
	White/SE	.095	.176	.589	1.100	.779-1.554
	Non-white/SE	-.204	.246	.406	.815	.503-1.320

Table 4.15
Research Question 5: West Virginia

Disposition	Predictor	B	S.E.	Sig.	Exp(B)	95% CI
Action	Non-White/NSE	-1.730	.225	.000	.177	.114-.276
	White/SE	-.528	.343	.124	.590	.301-1.157
	Non-white/SE	-.980	.699	.161	.375	.095-1.476
Other	Non-White/NSE	-.405	.835	.627	.667	.130-3.425
	White/SE	-18.410	11602.711	.999	.000	.000
	Non-white/SE	-18.410	23205.422	.999	.000	.000

CHAPTER V: DISCUSSION

Based on current Federal efforts to improve the nation's school discipline practices, the results of this study have been reported at a very opportune time. This final chapter will focus on interpreting the results, suggesting additional research, describing limitations of the study, and suggesting appropriate practices regarding school discipline and the StPP based on evidence from this study.

The most significant finding of the study was revealed by Research Question 1. Although all five states experienced a decline in JCRs from 1995 to 2011, there was a consistent increase in the total number of SBJCRs for all states from 1995 to 2011. This occurrence was evidenced by the number of referrals originating in schools increasing while the total of number of JCRs in all states decreased. Although this is a significant finding, it must be understood that the units compared for Research Question 1 were different. Specifically, the NJDCA data reported cases while the NCES data reported students. Therefore, the NJCDA data could include multiple cases for one student. However, the difference in units is not believed to have greatly impacted the nature of the results. The increase of SBJCRs found is consistent with previous research examining the StPP (Fabelo et al., 2011; Krezmien, et al., 2010; Morgan et al., 2014). These studies and additional literature has offered many possible factors to support this increase in SBJCRs: (a) Gun Free School Act and Zero Tolerance, (b) exclusionary discipline, and/or (c) SROs.

Gun Free School Act/Zero Tolerance

The results of Research Question 1 support the paradigm shift that occurred after the 1994 GFSA and subsequent introduction of Zero Tolerance policies. By the end of 1997, over 90% of U.S. public schools reported implementing ZT policies regarding possession of weapons on school property (Forgione, 1998). Of the 90%, 88% reported also having ZT policies

regarding alcohol and drugs. In addition, 79% of the schools reported also using ZT policies for violence (Forgione). These statistics visibly support the results reporting the increase of SBJCRs from 1995 to 2011. In addition to the use of SBJCRs, schools also increased the use of out-of-school suspensions and expulsions to respond to student behavior (Brown, 2012; Losen & Gillespie, 2012; Losen & Martinez, 2013; Morgan et al., 2014; Vavrus & Cole, 2002).

School Resource Officers

Researchers have indicated that the increase in SBJCRs can be attributed to the increase of SROs, which were used to enforce ZT policies and promote a safe learning environment. In addition, SROs have been used to fill the gap between schools and the police to ensure a safe environment for all (Weiler & Cray, 2011) In short, SROs were introduced to schools to provide extra security measures. However, instead of SROs only responding to criminal behavior, they have been known to respond to disorderly conduct (Kim & Geronimo, 2009). When responding to misdemeanors and/or non-violent crimes, SROs are promoting punitive discipline, rather than security. The presence of SROs in schools can also help explain the increase in SBJCRS evidenced by Research Question 1.

Exclusionary Discipline

The results of Research Question 1 are supported by the frequent use of exclusionary discipline that occurred in response to ZT policies. Schools reported using exclusionary discipline, specifically suspensions or expulsions, either before or at the same time as submitting a SBJCR (Morgan et al., 2014). Evidence from the 2006 Civil Rights Data Collection reported that more than 3.25 million students, 7% of K-12 students in the U.S., were estimated to have been suspended at least once (Losen, 2011). These data indicate that the number of suspensions, nation-wide, have at least doubled since the 1970s. Many of the studies discussed in the literature review noted that there has been a disparate impact created by the use of exclusionary discipline

for two school-aged groups: ethnic minorities and special education students (Vavrus & Cole, 2002; Losen & Gillespie, 2012; Losen & Martinez, 2013; Brown, 2012). Research Question 1 did not analyze the data regarding the Disparate Impact theory. However, an increase in the number of SBJCRs may suggest an increase in the number of ethnic minorities and special education students referred.

Federal legislation and discipline practices and policies changed from 1995 to 2011. It appears that these changes were probable catalysts for the increase in SBJCRs. The undisputed findings, across all five states, of Research Question 1 suggest that if other states engaged in similar practices, comparable results are likely.

Research Question 2 uncovered some very interesting findings. The results are discussed based on the two predictors of the analysis: Referral Source and Year.

Referral Source

Notwithstanding the results indicating variability across the five states, there were some results that indicated specific findings.

With Dismiss used as the reference category, all results were interpreted in reference to the disposition Dismiss. When a case is dismissed, it typically suggests that for whatever reason, the original claim of the referral is not considered a crime. Of the four dispositions, Action, Transfer, Commit and Other, each were associated with increased likelihood of the SBJCR being dismissed. Again, there was great variability across states and disposition, however, the common trend of at least one state producing statistically significant results cannot be ignored. Research supports that most SBJCRs are not related to violent crimes against others (Morgan et al., 2014; Krezmien et al., 2010).

The findings indicate that the disposition Dismiss occurred more often than the other four dispositions. This finding is clearly supported by current research regarding SBJCRs. The *School Discipline Consensus Report* (2014), addresses concerns that arise when schools refer students to the juvenile justice system for minor misconduct. Most importantly, schools have been observed relying on the juvenile justice system to respond to student misbehavior and thus engaging the StPP. Often, SBJCRs are for juvenile offenses involving disruptive or inappropriate behavior, not serious or violent behaviors (Morgan, Salomon, Plotkin & Cohen, 2014). Not only do these frivolous SBJCRs cause strain on the juvenile courts system but also introduce youth to the justice system increasing the likelihood for future involvement (Morgan et al.). In addition, unwarranted SBJCRs and the use of the juvenile justice system for school discipline can cause financial implications at many different levels.

It is important to note the financial strains SBJCRs can have on the economy. As evidenced by the results of Research Questions 1 and 2, the use of SBJCRs can introduce youth to the justice system. The increase of referrals to the juvenile courts also have financial costs on society (Advancement Project, 2013). Indirect and short-term costs of SBJCRs can include: use of SROs, administrative school and court costs, and loss of federal education revenue. The long-term financial burdens associated with SBJCRs and the StPP can include: lost tax revenue, increased costs on public health, welfare expenses and incarceration expenses (Advancement Project). Ultimately, dismissed SBJCRs can have many unnecessary financial ramifications to not only the schools and courts but also to society as a whole.

Although little is known about the dismissed cases, it can be inferred the use of SBJCRs contributed to an overall increase from 1995 to 2011 as shown by results of Research Question 1. The results of Research Question 2 confirm the observation that youth are being introduced to

the justice system by schools. In addition, the increased likelihood of dismissals supports that the original claims of SBJCRs were not supported by the courts.

Year

The predictor Year was associated with an increase of the likelihood that a SBJCR would receive a disposition other than dismissed. As reported from Research Question 1, the referral rate of SBJCRs increased for all states from 1995 to 2011. These results are not surprising when in context of ZT policies, which were adopted in the mid to late 1990s. ZT policies have been associated with strict discipline policies and possible SBJCRs engaging the StPP (Krezmien et al., 2010). Therefore, the increase in the likelihood of SBJCRs to result in the dispositions Action, Transfer and Commit when compared to Dismiss is conceivable.

In AZ, the results for Research Question 2 were nonconforming when compared to the other four states. AZ was the only state to produce results associated with a decreased likelihood that a SBJCR would receive a disposition other than Dismiss, from 1995 to 2011. AZ was unique in that for the dispositions Transfer, Commit and Other produced ORs significantly less than 1.0 indicating that cases were less likely to receive the dispositions in 2011 when compared to 1995. Although these results are atypical for the predictor Year when compared to the other four states, it may have been situational for the state of AZ at the time. Specifically, AZ's juvenile justice system experienced a reform in the late 1990s and early 2000s. In an attempt to improve the treatment and services to youth in the state of AZ, a strategic plan was implemented in 1998 and lasting until 2002 (Arizona Supreme Court, 2001). As outlined in the strategic plan, the Juvenile Justice Services Division (JJSD) enacted multiple interventions to improve care for youth involved in the juvenile justice system. Collaboration between the AZ JJSD and Department of Education was indicated as an essential component to improving youth services (Arizona

Supreme Court). After reviewing the strategic plan, it seems plausible that the plan's implementation could have contributed to a decrease in likelihood of the dispositions Transfer, Commit and Other from 1995 to 2011.

Although the results for Research Question 2 varied across states, years and dispositions, there is enough evidence to suggest that the outcomes were supported by past and current research. It is important to note that the recoding of the dispositions may not have been consistent across dispositions and states, however it was not possible to control for differences when examining large data sets specific to each state and year. Previous research has addressed the lack of reliable data stemming from SBJCRs (Morgan et al., 2014). The condition of SBJCR data has also limited previous research attempts. After considering the somewhat erratic condition of the data analyzed, the results for predictor Referral Source aligned with overall claim that SBJCRs were more likely to result in the disposition Dismiss when compared to the other four dispositions examined. Based on previous research, it is likely that SBJCRs were dismissed at a higher rate than all other dispositions due to the reason for the referral. Most SBJCRs are for minor, non-violent offenses (Advancement Project, 2010; Teske, 2011). Similarly, the predictor Year, in four of the five states, appeared to follow trends set by ZT policies established in the mid to late 1990s.

Based on the results of Research Question 3, state race demographics had a surprising impact on the results. To aid with interpretation, Figures 5.1 to 5.4 display the distribution of White and Non-white population in each state in 1995 and 2011. Based on the figures, it is obvious that although only one state, AZ, reported increased odds for non-white students to receive a SBJCR than white students the ethnic populations of each state likely played a role in the unanticipated results. However, this study specifically examined the impact of Race on

SBJCRs. Based on the results of four of the states, racial disproportionately is not directly associated with the likelihood of receiving an SBJCR. As previously mentioned, there were large quantities of missing data, nearly 50%, regarding the predictors of Race and Referral source in SC and WV. These unknown data may have contributed to the results for Research Question 3 for SC and WV. Additionally the data analyses of all states, excluding AZ, produced much larger representations of White students than Non-white students. These figures, again, are not supported by previous research regarding school discipline and the juvenile justice system. It is suspected that the racial composition of the states studied could have greatly affected the results for Research Question 3.

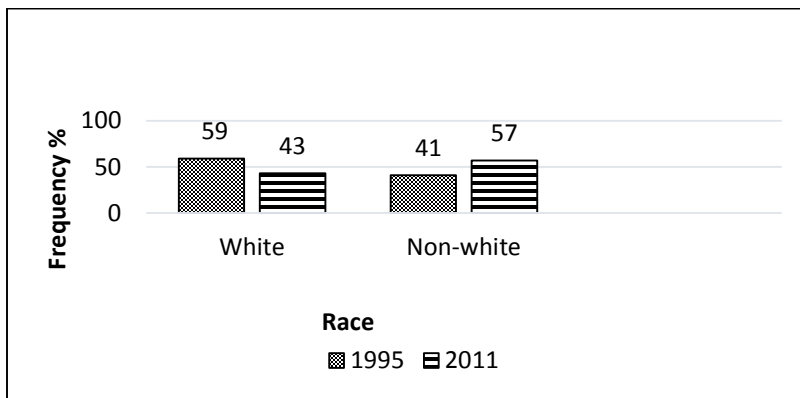


Figure 5.1. Arizona Racial Distribution: 1995 & 2011

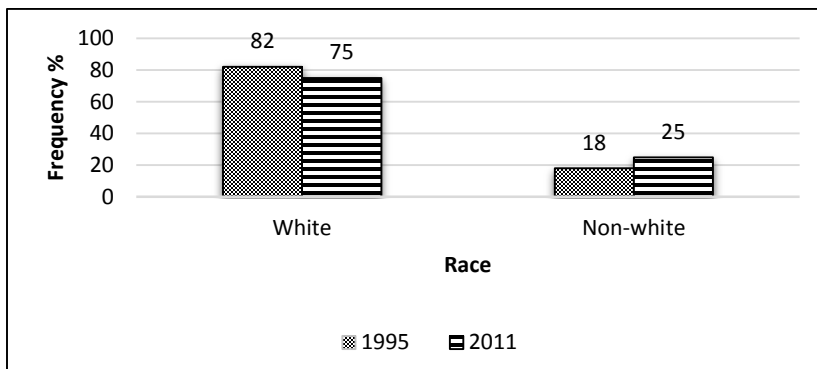


Figure 5. 2. Missouri Racial Distribution: 1995 & 2011

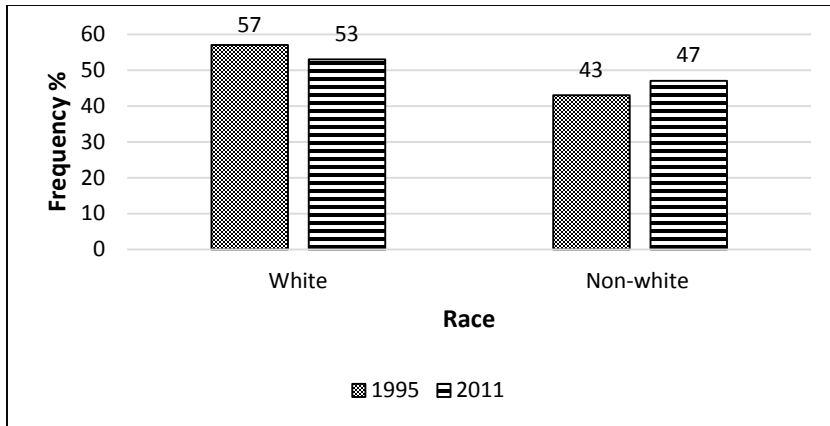


Figure 5. 3. South Carolina Racial Distribution: 1995 & 2011

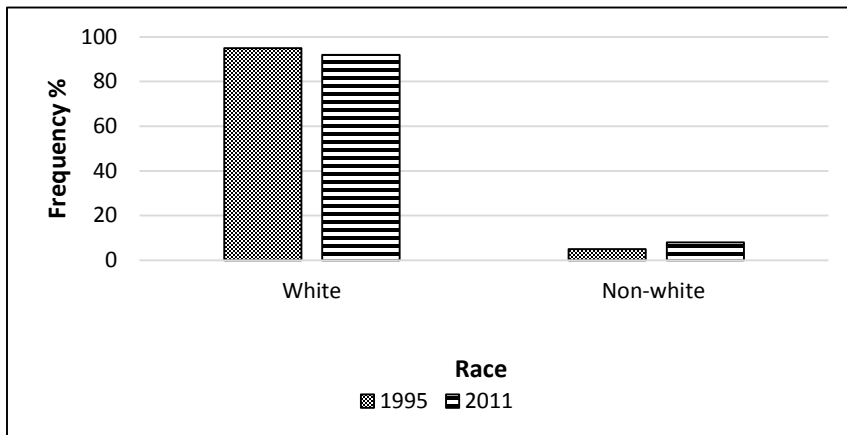


Figure 5.4. Arizona Racial Distribution: 1995 & 2011

For the predictor Year, all states produced ORs significantly greater than 1.0 indicating that when compared to 1995, all states experienced increased likelihood of SBJCRs (Figures 5.1-5.4). This is not surprising based on the historical context of ZT and NCLB. The results can also be supported by the results of Research Question 1 which indicated an overall increase in the number of SBJCRs from 1995 to 2011. Again, it is likely that the increase in likelihood to receive a SBJCR is linked with the impact of ZT policies.

The results of Research Question 3 are easily supported by previous research regarding the impact of race on the likelihood of youth receiving a JCR or SBJCR. National data indicates that nearly two-thirds, 66%, of all delinquency cases involved White youth (Hockenberry & Puzzanchera, 2014). However, research also indicates that the number of White youth involved in the juvenile system decreased from 1995 to 2011 (Hockenberry & Puzzanchera), which was also supported by the results of Research Question 3. In contrast, youth identified as belonging to a race other than White (Non-White) demonstrated a minor to moderate increase in prevalence the juvenile system (Figures 5.1 – 5.4) Additionally, these results are supported by the Juvenile Court Statistics Report for 2011 (Hockenberry & Puzzanchera).

Research Question 4 was unique in that it analyzed a very specific student characteristic, Disability Status. The analysis was only conducted using TN and WV because both states reported education status as part of the juvenile court data. Both states yielded increased odds for SE students to receive a SBJCR. This is consistent with previous disparate impact research regarding school discipline (Brown, 2012; Fabelo et al., 2011; Losen, 2012; Losen & Gillespie, 2012; Losen & Martinez, 2013). However, this study was unable to report the specific disability categories that were disproportionately affected by SBJCRs (Fabelo et al., 2011). Furthermore, the results from this analysis went a step further by confirming that SE students, in these 2 states, were more likely to receive a SBJCR as a disciplinary measure than their non-disabled peers. When paired with the results from *Breaking School Rules*, that indicated approximately 75% of SE students in the cohort they studied in Texas experienced exclusionary discipline, it evident that SE students have received disproportionate SBJCRs and/or exclusionary discipline in at least three states (Fabelo et al., 2011). Although Research Question 4 only involved data from two U.S. states, it adds to the literature greatly as it is evidence assuring the confirmation of the StPP

phenomenon for SE students. In both TN and WV, approximately 15% of the student population were classified as SE students in 2011 (Tennessee, 2015; West Virginia, 2014). Based on the results of Research Question 4 SE students were more likely than NSE student to receive a SBJCR. The results of Research Question 4 bring into question whether schools are abiding by the provisions set out in IDEA that prohibit removing students with disabilities from schools without adhering to the disciplinary removal guidelines. Consequently, Federal mandates of IDEA must be examined, as it appears SE students' rights may be violated through the use and abuse of exclusionary discipline and referrals to the juvenile courts.

The results for Research Question 5 were not consistent with previous research regarding two of the groups that are disproportionately represented through exclusionary discipline in schools: non-white students and SE students. In both states, the results did not indicate a disproportionate representation when examining the combined predictor variable of Race and Disability Status.

The inconsistency of the data set and missing data may have influenced the results of Research Question 5 greatly. As in previous studies, the lack of consistent and reliable data prohibited accurate data analysis (Morgan et al., 2014). I argue that across all research questions, Research Question 5 presented the most difficulty regarding the data set since Disability Status was only recorded in two of the 6 states analyzed. In addition, being that Disability Status was only available for two of the 42 states participating in the NJDCA data repository, I suspect that Disability Status may lack accuracy when compared to the other variables of Race, Referral Source and Disposition. As indicated through previous and existing research, ethnic minorities and special education students are disproportionally represented through school discipline (Blake et al., 2011; Brown, 2012; Fabelo et al., 2011; Kinsler, 2011; Losen, 2011; Losen & Gillespie,

2012; Losen & Martinez, 2013). However, previous and existing research has also noted the lack of quality data documenting students' referral from schools to the juvenile courts (Morgan et al.).

Limitations

There are a number of limitations that affected the results and validity of this study. The datasets were existing state level data provided to NJCDA. Each state had its own data collection procedures and data codes. Therefore, the meaning of the codes could easily differ between states or even jurisdictions within states. A critical aspect of preliminary data analysis was the recoding of court dispositions. Although I recoded the disposition data in each state into five categories, I suspect there was still a great amount of variability of the dispositions between the states. The inconsistency across states, years and jurisdictions was the major challenge to data analysis and interpretation. In addition, there is no way to examine the accuracy of the data collection procedures for each state. Missing data was a significant factor that influenced the analyses, especially in SC and WV. All of the data examined for this study were second-hand data, meaning that I did not directly collect any of the data analyzed. This is automatically a limitation because the accuracy of data collection cannot be ensured. Due to the nature of the study, there was no way to control for these issues.

A significant limitation effecting Research Question 1 was the units being examined. The NJCDA data examined case-level data not individual students. Therefore, the NJCDA data could include multiple cases for one student. In contrast, the NCES data counted each student as one unit.

The six different states examined provided a snapshot of the United States juvenile court data. However, there were many characteristics that were specific to the states in this study. For example, HI had an extremely large number of Hawaiian and Pacific Islander for the category

Race. In contrast, WV had an extremely large number of white youth and a very low percentage of minorities. These issues, among others, made it difficult to devise accurate generalizations from the results of the study.

The data analysis methods used in this study are correlational. Therefore, the results cannot suggest any causality. Correlational data helps to aid in understanding of the factors that are incorporated in to the StPP. However, in no way do they suggest the cause or origin of the results.

Recommendations for Practice

Towards the end of the 19th century the juvenile justice system was created with the intention of rehabilitating, not punishing, troubled youth. Now more than 100 years later, it appears that old habits have resurfaced. The distinct differences between the education and juvenile justice systems have been bridged by the StPP. On regular basis, events occurring in schools are confirming the link between schools and the courts. For example, in 2010 a class action lawsuit was filed against Birmingham Alabama schools because police were using pepper spray in schools to retaliate against students (Southern Poverty Law Center, 2015). However, the pepper spray was being used in response to minor misbehavior such as “back-talking” and “challenging authority” (Southern Poverty Law Center). More recently, disturbing video footage surfaced of a SRO flipping over a desk of a female student as she remained in the desk and dragging her, with the desk, outside of the classroom. This physical act was in response to the student disrupting the class and refusing to leave the classroom (New York Times, 2015). Both examples highlighted above clearly demonstrated the misuse of SROs in schools. In both situations, disciplinary violations should have been handled by the school administration not

policemen. Both situations were similar in that there were not possible threats to others and the use of police force was unnecessary.

SBJCRs are still being used as consequences for school misbehavior across the nation. The results of this study showed the rate of SBJCRs increased from 1995 to 2011 in the five states where this practice was examined while overall juvenile court referrals decreased in these states and delinquency decreased across the nation. The influx of SBJCRs resulted in 27.5% of all juvenile court referrals in 2011 originating in schools (Hockenberry & Puzzanhera, 2014). These alarming data alone, should urge schools to reform the ways in which they respond to misbehavior.

The data reported in the Youth Risk Behavior Surveillance report (2013) clearly demonstrate that risk of violence, including bringing and/or using weapons at school have decreased greatly since 1993. This remarkable trend should be celebrated and reinforced by a systematic removal of ZT policies that were originally put in place due to violent school shootings occurring in the 1990s. However, schools continue to enforce these policies although they are most commonly used in response to non-violent behaviors.

Currently, the interactions between schools and juvenile courts seem counterproductive and not in the best interest of students. As evidenced by Research Question 2, my analyses indicated that in three of the five states SBJCRs were more likely to be dismissed by the juvenile courts than handled as juvenile offenses. To eliminate unnecessary SBJCRs, minor student misconduct must be addressed without involvement of the police and/or juvenile courts (Morgan et al., 2014). School-justice partnerships can provide a collaborative framework to address non-threatening student misbehavior without students engaging in the StPP (Morgan et al.).

Previous research has confirmed a disproportionate representation of racial minorities and youth with disabilities not only with regard to school discipline but also in the juvenile justice system (Blake et al., 2011; Brown, 2012; Fabelo et al., 2011; Kinsler, 2011; Losen, 2011; Losen & Gillespie, 2012; Losen & Martinez, 2013). However, based on the results of Research Question 3, it appears that disproportionate exclusion of minority and special education students from school does not appear to lead disproportionate court referrals from schools. In addition, the disproportionate number of these two subgroups in the juvenile justice system do not appear to be a direct result of disproportionate court referrals from schools. In contrast, the results of Research Question 4 confirmed that disproportionate representation based on disability status applies to the StPP. Although the exact cause of this disproportionate representation is unknown, it is certain that changes must be made to support non-white students and students with disabilities to decrease their involvement in the StPP. Frequent and routine monitoring of SBJCRs and the characteristics of the referred students should be the first steps to elicit change. However, to effectively monitor the flow of SBJCRs, schools and juvenile courts must collaborate to create and ensure reliable data collection efforts (Morgan et al., 2014). Many of the challenges and limitations that affected the statistical analyses of this study were caused by insufficient data and problematic data collection procedures.

The School Discipline Guiding Principles (2014) introduced by the Federal Government are the first efforts at implementation of nationwide discipline practices. As demonstrated by Judge Teske (2011), it is possible to mitigate the effects of Path 2 of the StPP. Judge Teske achieved this goal by implementing a multi-systems approach to deal with student misbehavior (Teske, 2011). Similarly, the U.S. Department of Education is attempting to implement and enforce guiding principles to aid in handling school misbehavior both within the walls of the

school and the community setting. The three guiding principles, Climate and Prevention, Clear Appropriate and Consistent Expectations and Consequences and Equality and Continuous Improvement, offer a general framework for education stakeholders to mold discipline practices (U.S. Department of Education, 2014). Within the Guiding Principles, are references and recommendations regarding SBJCRs. Specifically, Action Step 6 of Guiding Principle 1: Climate and Prevention, prescribes focus on school safety and reducing inappropriate referrals to law enforcement (U.S. Department of Education). Action Step 6 also focuses on reduction in the use of law enforcement regarding school discipline. The Action Step also reiterates the importance of consistent and accurate data collection regarding a disciplinary and school safety measures (U.S. Department of Education). Both Guiding Principles 2 and 3 focus on the equitable treatment for non-white students and students with disabilities. In addition, the principles stress the importance of adhering to the Federal Civil Rights of students and rights granted through IDEA. Throughout all principles, is a focus on collecting, tracking and utilizing data regarding school disciplinary practices and procedures (U.S. Department of Education).

Not only did this study quantify the dynamic of SBCJRs and the results on the juvenile court systems, but it also supported previous claims regarding the insufficient data on SBJCRs. The results of this study can easily be paired with efforts to implement and enforce the Guiding Principles established by the Federal Government. In order to be effective, the implementation of the Guiding Principles must involve data-driven practices to elicit and maintain change at the state and school level.

Recommendations for Future Research

Future research must first focus on developing data collection and management procedures that can allow easy and reliable implementation and tracking of behavioral incidents

in schools. Lack of sufficient data hinders the overall analyses of SBJCRs. Using detailed and reliable data, both pathways identified by Krezmien and his colleagues (2014) should be used as frameworks for future studies. Specific areas that require further research are: (a) the consistency of disciplinary policies on national, state, district and school levels, (b) implementation and effectiveness of the School Discipline Guiding Principles, and (c) multilevel analyses involving the examination of all races and all disability status variables. Using reliable and robust data, detailed analyses will allow education stakeholders to examine the issues in more detail than the binary logistic regression analyses conducted for this study.

Although the School Discipline Guiding Principles provide a glimmer of hope regarding discipline practices, the reliability and validity of the principles must be examined prior to nationwide implementation. It is suggested that stakeholders begin with a statewide review of current practices and their congruence with the Guiding Principles. Next, schools should develop strategic plans focusing on successful implementation of the Guiding Principles. Once implementation occurs, focus should examine the follow through and maintenance of the Guiding Principles. The Guiding Principles could be an extremely useful tool if applied and executed in a systematic manner.

Conclusions

In the past, the theoretical StPP has been supported by research studies providing both school level and juvenile court level data confirming SBJCRs. However, this study used Path 2 of the StPP (Krezmien et al., 2014) as the framework to examine multiple student characteristics and their effect on SBJCRs. The precise and systematic analyses conducted using the predictors of Referral Source, Race and Disability Status provided a clear glimpse of how these student and school level factors may affect the use of SBCJR as consequences for student misbehavior.

Although the analyses yielded varied results, a comprehensive review of the results depict schools' current overreliance on the juvenile court system to address non-threatening student misbehavior.

Previous research has confirmed that non-white students and special education students are overrepresented in school discipline and the juvenile justice system. However, the impact of the StPP has previously lacked sufficient data to analyze and confirm any clear correlation to school discipline and the juvenile justice system. Although the results of this study did not indicate the predictors Race and Race combined with Disability Status as impacting the use of SBJCRs, there continues to be a disproportionate representation of these students relating to exclusionary discipline and in the juvenile justice system. The cause of this dynamic requires additional research.

It appears that changes in school discipline policies over time have led to inconsistent practices. In some cases, discipline policies may be violating students' Federal Civil Rights and regulations set forth by IDEA. In order to effectively address the disproportionate number of non-white youth and youth with disabilities involved in the juvenile justice system, we must remove the catalysts: effects of racial bias, over reliance on exclusionary discipline and the juvenile justice system to respond to school misbehavior. As demonstrated by the efforts of Judge Teske in Georgia, establishing a clear multi-systems approach and adhering to consistent guidelines to deal with school misbehavior, the StPP could be interrupted and eventually dismantled. However, this is much easier said than done. Alignment with the Guiding Principles established by the Federal Government should be used as a mechanism to intervene effectively to current inequitable disciplinary policies and practices.

I anticipate that if implemented properly, the Guiding Principles could also, indirectly, intervene with Path 1 of the StPP identified by Krezmien et al. (2014). Although Path 1 was not a focus of this study, its dynamic stems from exclusionary discipline and/or academic barriers. The hope is that, the Guiding Principles will help to subdue schools' reliance on exclusionary discipline which could help students remain in school and off of the streets. Until behavioral and emotional needs of students are successfully addressed, academic barriers and deficits will remain (Flannery, 2015). The findings of this study, when combined with implementation of the Guiding Principles, should be used as a tool to begin dismantling of the StPP so that educational practices can undeniably educate all youth as granted by Federal Legislation.

Appendix

Definition of Terms

Cycle of inopportunity- The repetitive cycle a student enters once a school initiates a referral to the courts for discipline issues (James, 2011).

Disability- A condition when a child is evaluated in accordance with Sec. Sec. 300.304 through 300.311 as having mental retardation (intellectual disability), a hearing impairment (including deafness), a speech or language impairment, a visual impairment (including blindness), a serious emotional disturbance (referred to in this part as "emotional disturbance"), an orthopedic impairment, autism, traumatic brain injury, any other health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, and who, by reason thereof, needs special education and related services (IDEA, 2004).

Discipline- Control gained by obedience or training (Merriam-Webster, 2004).

Disposition- The most reasonable and appropriate sanction determined by the juvenile court (Church, Springer & Roberts, 2014).

Diversion- An intervention intended to redirect behavior and reduce delinquency (Church, Springer & Roberts, 2014)

Elementary and Secondary Education Act (ESEA)- Ratified in 1965 and provided federal funds to local public schools to create equal access to education across the United States. In 2001, ESEA was reauthorized under the title "No Child Left Behind" (NCLB), which set additional standards for student performance and teacher quality (U.S. Department of Education, 2004).

Emotional Disturbance- A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational

performance: a) an inability to learn that cannot be explained by intellectual, sensory, or health factors, b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers, c) inappropriate types of behavior or feelings under normal circumstances, d) a general pervasive mood of unhappiness or depression and e) a tendency to develop physical symptoms or fears associated with personal or school problems (IDEA, 2004).

Exclusionary discipline- The use of disciplinary methods that remove a student from the school environment, for example, out of school suspension and/or expulsion (Losen, 2011).

Juvenile court referral (JCR)- A process in which law enforcement issues a citation to a youth as a result of having committed an egregious violation of the law or for engaging in delinquent behavior (Church, Springer & Roberts, 2014).

Juvenile justice system- The court system developed to intervene, sanction and rehabilitate children and adolescents who have been accused of, or committed, a crime (Center on Juvenile Justice, 2013).

Racial Bias- A mental process that causes negative feelings and attitudes about people based on race (Rudd, 2014).

School-Based Juvenile Court Referral (SBJCR)- A court referral that is sent to the court system by a public school official in response to inappropriate student behavior (Krezmien et al., 2010).

School Climate- The quality and character of school life based on patterns of students', parents' and school personnel experience of school life (NSCC, 2014).

School-to-Prison Pipeline (StPP)- policies and practices that push our nation's school children out of the classroom and into the juvenile and criminal justice systems (ACLU, 2014)

School Resource Officers (SROs)- Officers that are hired by the school or local police department to patrol public school hallways full-time (Kim & Geronimo, 2009).

School-wide discipline- Practices that relate to the total operation of the school rather than a single classroom (Rosen, 2005).

Zero Tolerance (ZT) policies- Originally used in schools to mandate expulsions for drugs, fighting and gang related activity. This concept has also been applied more broadly in schools and refers to major and minor school misbehavior and disruption (Skiba & Knesting, 2002).

References

- Advancement Project. (2010). *Test, punish and pushout: How “ZT” and high-stakes testing funnel youth into the school-to-prison pipeline*. Retrieved from <http://advancementproject.org>
- Advancement Project. (2011). *Ending the schoolhouse to jailhouse track*. Retrieved from: <http://www.advancementproject.org/issues/stopping-the-school-to-prison-pipeline/pages/stories-and-victories>
- Advancement Project. (2013). *Handcuffs on success: The extreme school discipline crisis in Mississippi Public Schools*. Retrieved from: <http://safequalityschools.org/resources/entry/handcuffs-on-success>
- Arizona Judicial Branch. (2014). Juvenile court. Retrieved from: <http://www.azcourts.gov/Portals/39/2011DR/JuvenileCourt.pdf#page=3>.
- Arizona Supreme Court. (2001). *Implementation plan for Deloitte Consulting recommendations to improve Arizona’s juvenile justice system*. Retrieved from: <https://www.azcourts.gov/jjsd/Publications-Reports>
- Allman, K.L. & Slate, J.R. (2012). School discipline for students with disabilities: A conceptual analysis. *Journal of Education Research*, 6(4), 345-368.
- Allman, K.L. & Slate, J.R. (2011). School discipline in public education: A brief review of current practices. *International Journal of Education Leadership Preparation*, 6(2), 1-8.
- American Civil Liberties Union (ACLU). (2014). What is the school-to-prison pipeline? Retrieved from: <https://www.aclu.org/racial-justice/what-school-prison-pipeline>
- American Psychological Association ZT Task Force. (2008). Are ZT policies effective in schools? *American Psychologist*, 63(9), 852-862.
- Aull, I.H. (2012). ZT, frivolous juvenile court referrals and the school-to-prison pipeline: Using arbitration as a screening-out method to help plus the pipeline. *Ohio State Journal of Dispute Resolution*, 27(1), 179-206.
- Bear, G. (2008). *Discipline: Effective school practices*. National Association of School Psychologists. Retrieved from: http://www.nasponline.org/publications/booksproducts/hchs3_samples/s4h18_discipline.pdf
- Blake, J.J., Butler, B.R., Lewis, C.W., Darensbourg, A. (2011). Unmasking the inequitable discipline experiences of urban black girls: Implication for urban education *stakeholders*. *Urban Rev*, 43, 90-106.
- Boudah, D.J. (2011). *Conducting Educational Research*. Thousand Oaks, California: Sage.
- Brown, T.M. (2012). The effects of educational policy and local context on special education students’ experiences in school removal and transition. *Educational Policy*, 26 (6), 813-844.

- Casella, R. (2003). ZT policy in schools: Rationale, consequences and alternatives. *Teachers College Record*, 105 (5), 872-892.
- Center for Evaluation and Education Policy. (2004). Zero tolerance: The assumptions and the facts. *Education Policy Briefs*, 2(1), 1-8
- Center on Juvenile and Criminal Justice. (2013). Juvenile justice history. Retrieved from <http://www.cjcj.org/Education1/Juvenile-Justice-History.html>
- Christle, C.A., Jolivette, K., & Nelson, C. M. (2005). Breaking the school to prison pipeline: Identifying school risk and protective factors for youth delinquency. *Exceptionality*, 13(2), 69-88.
- Church, W.T., Springer, D., Roberts, A.R. (Ed.s). (2014). *Juvenile Justice Sourcebook, Second Edition*. New York, NY: Oxford University Press.
- Dunbar, C. Jr., & Villarruel, F.A. (2004). What a difference the community makes: ZT policy interpretation and implementation. *Equity & Excellence in Education*, 37, 351-359.
- Duncan, A. (January 8, 2014). *Rethinking school discipline*, Remarks of the U.S. Secretary of Education, Baltimore, Maryland: U.S. Department of Education. Retrieved March 17, 2014, from <http://www.ed.gov/news/speeches/rethinking-school-discipline>
- Evolving Classroom. (2001). The story of American public education: discipline. Retrieved from: https://www.pbs.org/kcet/publicschool/evolving_classroom/discipline.html
- Fabelo, T., Thompson, M.D., Plotkin, M., Carmichael, D., Marchbanks, M.P. & Booth, E.A. (2011) *Breaking school rules: A statewide study of how school discipline relates to students' success and juvenile justice involvement*. Council of State Governments Justice Center. Retrieved from: <http://csgjusticecenter.org/youth/breaking-schools-rules-report/>
- Flannery, M.E. (2015, January 5). *The school-to-prison pipeline: Time to shut it down*. National Education Association. Retrieved from: <http://neatoday.org/2015/01/05/school-prison-pipeline-time-shut/>
- Forgione, P.D. (1998). *Violence and discipline problems in U.S. public schools: 1996-1997*. National Center for Education Statistics. Retrieved from <https://nces.ed.gov/pressrelease/violence.asp>
- Gonzalez, T. (2012). Keeping kids in schools: Restorative justice, punitive discipline and the school-to-prison pipeline. *Journal of Law and Education*, 41(2), 281-335.
- Hawaii State Judiciary. (2014). Family court. Retrieved from: <http://www.courts.state.hi.us>

- Hockenberry, S. & Puzzanchera, C. (2014). *Juvenile court statistics 2011 report*. National Center for Juvenile Justice. Retrieved from <http://www.ojjdp.gov/ojstatbb/njcda/pdf/jcs2011.pdf>
- Hoffman, S. (2012). Zero benefit: Estimating the effect of ZT discipline policies on racial disparities in school discipline. *Educational Policy*, 28(1), 69-95.
- Individuals with Disabilities Education Act, 20 U.S.C. § 1400 (2004).
- Ingraham v. Wright. 430 U.S. 651 (1977). Retrieved from <http://supreme.justia.com/cases/federal/us/430/651/case.html>
- James, M.C. (2011). Toward systems of opportunity: How to cap pipelines to prisons in schools. *Journal of Curriculum and Pedagogy*, 8 (2), 123-127.
- Judicial Branch of Arizona. (2014). Mission Statement. Retrieved from: <http://www.superiorcourt.maricopa.gov/SuperiorCourt/JuvenileCourt/mission.asp>
- Kajs, L.T. (2006). Reforming the discipline management process in schools: An alternative approach to ZT. *Educational Research Quarterly*, 29(4), 16-27.
- Kinsler, J. (2011). Understanding the black-white school discipline gap. *Economic of Education Review*, 30, 1370-1383.
- Klehr, D.G. (2009). Addressing the unintended consequences of No Child Left Behind and ZT: Better strategies for safe schools and successful students. *Georgetown Journal on Poverty Law & Policy*, 16, 585-610.
- Kim, C.Y., & Geronimo, I.I. (2009). *Policing in schools: Developing a governance document for school resource officers in K-12 schools* (An ACLU White Paper). New York: ACLU. Retrieved from: http://www.aclu.org/pdfs/racialjustice/whitepaper_policingschools.pdf
- Krezmien, M.P., Leone, P.E., Wilson, M.G. (2014). *Marginalized students, school exclusion and the school-to-prison pipeline*. In Church, W.T., Springer, D., Roberts, A.R. (Ed.s). (2014). *Juvenile Justice Sourcebook, Second Edition* (267-287). New York, NY: Oxford University Press.
- Krezmien, M.P., Leone, P.E., Zablocki, M.S. & Wells, C.S. (2010). Juvenile court referrals and public schools: Nature and extent of the practice in five states. *Journal of Contemporary Criminal Justice*, 26(3), 273-293.
- Laerd Statistics. (2013). Retrieved from: <https://statistics.laerd.com/>
- Lomax, R.G. & Hahs-Vaughn, D.L. (2012). *Statistical concepts: A second course*. (4th ed.). New York, New York: Routledge.

- Losen, D.J. (2011). *Discipline policies, successful schools and racial justice*. Retrieved from the National Education Policy Center website:
<http://nepc.colorado.edu/publication/discipline-policies>
- Losen, D.J. & Gillespie, J. (2012). *Opportunities suspended: The disparate impact of disciplinary exclusion from school*. (The Civil Rights Project report). Retrieved from
<http://civilrightsproject.ucla.edu/resources/projects/center-for-civil-rights-remedies/school-to-prison-folder/federal-reports/upcoming-crr-research/losen-gillespie-opportunity-suspended-2012.pdf>
- Losen, D.J. & Martinez, T.E. (2013). *Out of school and off track: The overuse of suspensions in American middle and high schools*. (The Civil Rights Project report). Retrieved from The Civil Rights Project website: <http://civilrightsproject.ucla.edu/resources/projects/center-for-civil-rights-remedies/school-to-prison-folder/federal-reports/out-of-school-and-off-track-the-overuse-of-suspensions-in-american-middle-and-high-schools>
- Morgan, E., Salomon, N., Plotkin, M. & Cohen, R. (2014). *The school discipline consensus report: Strategies from the field to keep students engaged and in school and out of the juvenile justice system*. Retrieved from Council of State Governments Justice Center:
<http://csgjusticecenter.org/youth/school-discipline-consensus-report/>
- Missouri Division of Youth Services. (2014). Division of Youth Services. Retrieved from:
<http://dss.mo.gov/>
- Merriam-Webster. (2004). *The Merriam-Webster Dictionary*. Springfield Massachusetts, Merriam-Webster Incorporated.
- National Center for Education Statistics. (2014). State Education Data Profiles. Retrieved from:
<http://nces.ed.gov/programs/stateprofiles/>
- National Center for Juvenile Justice. (2014). Retrieved from: <http://www.ncjj.org>
- National Juvenile Court Data Archives. (2014). Retrieved from:
<http://www.ojjdp.gov/ojstatbb/njcda/>
- National School Climate Center. (2014). School Climate. Retrieved from:
<https://schoolclimate.org/climate/>
- Nicholson-Crotty, S., Birchmeier, Z., & Valentine, D. (2009). Exploring the impact of school discipline on racial disproportion in the juvenile justice system. *Social Science Quarterly*, 90 (4), 1003-1018.
- Nocella, A. J., Parmar, P., & Stovall, D. (2014). *From education to incarceration: Dismantling the School-to-Prison Pipeline*. New York, New York, Peter Lang Publishing Inc.
- Office of Juvenile Justice and Delinquency Prevention. (2014). *Juvenile justice system structure and processes*. Retrieved from: http://www.ojjdp.gov/ojstatbb/structure_process/faqs.asp

- Office of Juvenile Justice and Delinquency Prevention (2014). Hawaii. Retrieved from: <http://www.ojjdp.gov/pubs/gender/state-hi.html>
- Rosen, L. (2005). *School discipline: Best practices*. Thousand Oaks, California, Corwin Press.
- Rudd, T. (2014). *Racial disproportionality in school discipline: Implicit bias is heavily implicated*. Kirwan Institute for the Study of Race and Ethnicity. Retrieved from: <http://kirwaninstitute.osu.edu/wp-content/uploads/2014/02/racial-disproportionality-schools-02.pdf>
- Skiba, R.J., & Knesting, K. (2002). ZT, zero evidence: An analysis of school disciplinary practice. *New directions for youth development*, 92, 17-43.
- South Carolina Department of Education. (2013). Department of Education. Retrieved from: <https://ed.sc.gov>
- South Carolina Department of Juvenile Justice. (2014). Retrieved from: <http://www.state.sc.us/djj/>
- Southern Poverty Law Center (2015). *SPLC wins lawsuit challenging use of pepper spray in Alabama school district*. Retrieved from: <https://www.splcenter.org/news/2015/10/01/splc-wins-lawsuit-challenging-use-pepper-spray-alabama-school-district>
- Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly*, 23(4), 462-480.
- Tennessee State Courts. (2015). State wide report card 2011. Retrieved from <http://edu.reportcard.state.tn.us/pls/apex/f?p=200:1:4412391349825540>
- Teske, S.C. (2011). A study of Zero Tolerance policies in schools: A multi-integrated systems approach to improve outcomes for adolescents. *Journal of Child and Adolescent Psychiatric Nursing*, 24, 88-97.
- U.S. Department of Education. (2004). *A guide to education and No Child Left Behind*. Office of the Secretary, Office of Public Affairs. Washington, D.C.
- U.S. Department of Education. (2014). *Guiding principles: A resource guide for improving school climate and discipline*. Retrieved from: <http://www2.ed.gov/policy/gen/guid/school-discipline/guiding-principles.pdf>
- U.S. Department of Education. (2014). Retrieved from: <http://www.ed.gov/>
- U.S. Department of Education, National Center for Education Statistics, Common Core Data (CCD), “State Nonfiscal Public Elementary/Secondary Education Survey”, 1994-95, v.1b.
- U.S. Department of Education, National Center for Education Statistics, Common Core Data (CCD), “State Nonfiscal Public Elementary/Secondary Education Survey”, 2010-11, v.1a.

- U.S. Department of Health and Human Services (2014). *Youth risk behavior surveillance—United States 2013*. Centers for Disease Control and Prevention. Surveillance Summaries, 63 (4). Retrieved from: <http://www.cdc.gov/mmwr/pdf/ss/ss6304.pdf>
- Vavrus, F. & Cole, K. (2002). “I didn’t do nothing”: The discursive construction of school suspension. *The Urban Review*, 34(2), 87-110.
- Weiler, S.C. & Cray, M. (2011). Police at school: A brief history and current status of school resource officers. *The Clearing House*, 84, 160-163.
- West Virginia Division of Juvenile Services. (2014). Juvenile Services. Retrieved from: <http://www.wvdjs.state.wv.us/>
- Williams, R. (2015). *Missing data part 1: Overview, traditional methods*. University of Notre Dame. Retrieved from: <http://www3.nd.edu/~rwilliam/>