



Bridgewater State University

Virtual Commons - Bridgewater State University

Master's Theses and Projects

College of Graduate Studies

5-1-2022

The Graduation Pipeline: Investigating the Effects of Juvenile Justice System Contact on High School Graduation Rates

Em Sandman

Follow this and additional works at: <https://vc.bridgew.edu/theses>

Recommended Citation

Sandman, Em. (2022). The Graduation Pipeline: Investigating the Effects of Juvenile Justice System Contact on High School Graduation Rates. In *BSU Master's Theses and Projects*. Item 102.

Available at <https://vc.bridgew.edu/theses/102>

Copyright © 2022 Em Sandman

This item is available as part of Virtual Commons, the open-access institutional repository of Bridgewater State University, Bridgewater, Massachusetts.

The Graduation Pipeline: Investigating the Effects of Juvenile Justice System Contact on
High School Graduation Rates

A Thesis Presented

By

EM SANDMAN

MAY 2022

Approved as to style and content by:

Signature: _____
Dr. Feodor Gostjev, Thesis Advisor Date

Signature: _____
Dr. Emily Brissette, Thesis Committee Member Date

Signature: _____
Dr. Jennifer Hartsfield, Thesis Committee Member Date

The Graduation Pipeline: Investigating the Effects of Juvenile Justice System Contact on
High School Graduation Rates

A Thesis Presented

By

EM SANDMAN

Submitted to the College of Graduate Studies

Bridgewater State University

Bridgewater, Massachusetts

In partial fulfillment of the requirements for the degree of

Master of Science

In Criminal Justice

MAY 2022

COPYRIGHT

© 2021

EM SANDMAN

ALL RIGHTS RESERVED

ABSTRACT

Contact with the juvenile justice system can seriously impact life chances for youth. System contact can lead to significant challenges by disrupting paths to traditional life attainments. Research overwhelmingly points to negative projections from juvenile system exposure. Labeling theory has been used to determine poor educational outcomes, but little work has been done to directly gauge why contact affects the graduating for system-involved students. Further, concepts of strain theory have yet to be sufficiently applied to the prospect of completing high school. Given the systematic similarities between school and the juvenile justice system, the likelihood of reaching academic expectations required to graduate can be shaped by strained encounters connected to experiences with the legal system. Expanding on previous studies that explore the harm of education disruption and academic inadequacies resulting from involvement, the current study conducts a quantitative analysis on Connecticut juvenile court and education records from 2006-2012 to explore whether and how high school graduation rates are affected by different features of contact with the juvenile justice system. This study aims explain the path to graduation for youth with criminal histories by examining the educational effects of detention and judicial handling. Findings contribute to the growing body of knowledge regarding the application of juvenile justice and the intersecting treatment of juveniles in both school and legal settings.

DEDICATION

This degree, this thesis, my learning, is dedicated to the small but mighty group who have held and hyped me up over the past two years. Without you I can do very little. With you I made it here. This is the biggest academic feat I have ever taken on and one that I never imagined being cut out for. I could not have completed this major milestone without your sacrifices; the choices you made so I could continue growing. Thank you.

To Noah, I wish for this degree to set the bar high for you. And the next one, even higher. I doubt you will remember the exhaustion over a laptop, the balancing act of wonder, but you will grow up to know that being mediocre is inadequate. You already show so much curiosity. If you're half as smart as me, you're going to need a large college fund to out-degree your mom. Whatever your path may be, I know you are going to excel in every pursuit because you watched mama do it. Success is our baseline. It's what makes us tick. I crave stability for our future because we could use some blessings among us. Your short but wonderful life has been filled with limited experiences, struggle, and fear. With this accomplishment, we are one step closer to finally being able to breathe. Wait until you see me on that stage at Gillette. I'll be sure to be looking for you. Here's to an opportunity to focus more on our bond and fully feel the many adventures that are coming our way: a future lifetime without writing papers. I promise that I won't be in school forever but until then, I hope you are proud that I am.

Ky and Elaine. I'm shocked you have stuck around long enough to see me get through this degree. I haven't always been the most kind, but regardless, you both showed up and stepped up to help raise Noah. He loves you dearly and I wouldn't have been able to attend BSU, achieve a perfect GPA (4.0 club!), and graduate, if I wasn't

confident that he was in the best and most loved hands. Elaine, thank you for never being too curious about what I was studying. You assumed I saw a bigger vision, even though truthfully, sometimes I didn't. I never really had the time to explain why I decided to tack on a couple more years of school, at times I still don't quite understand. But, I think the main reason was to ensure I disband the first-generation college status, multiplied by a few. Although you knew deep down that I was meant to be challenged, I don't think you ever pictured it would be in education. Take a look at me now.

Ky, I'm convinced the past two years that coincided with this degree have been the most trying times that two people should ever endure in an entire lifetime. Sometimes it felt like the entire world was against us, at some points it definitely was, but this time, it's one more win we have under our belt. I probably should have withdrawn from the program once things got tough, and then tougher, but you never allowed me to stray from my dreams. You always remind of why I'm a gifted, even when I feel absolutely talentless. As the family says, "the stars do it all". This degree makes me feel like star, a rockstar that is. Thank you for staying positive and being the family's rock. We have so much to look forward to. I cannot wait to settle down after graduation, even if only for a month, so we can finally start to make headway on your dreams.

The last dedication goes to my special girl, Blue Rat Pig. No one could ever understand the bond we have and how you as a presence and as a soul makes me persevere. As the constant when everything else was unknown, you are loyalty. Through the tears and the Zoom classes. The early mornings, late nights, and all-day writing sessions in bed. You were an assistant, a partner in crime, a sous chef, a co-worker, and a confidant. If anyone else also deserves a degree, it would be you. Quite literally. You sat

through the content, came to campus, and became an integral part of this journey. You have a very grateful best friend.

My little party of 4, I thank you for being my people. My crew. My team. My existence and my entirety. We may not have it all, or very much in that fact, but I do have enough pizzazz to last us a while. It's taken me this far so let's keep trusting the process.

ACKNOWLEDGEMENTS

I would like to express the sincerest and amplified gratitude to Bridgewater State University, the College of Graduate Studies, the faculty from the Criminal Justice Department, and my closest classmates who have traveled this journey right alongside me. The BSU community has been nothing but supportive for the last 6+ years but for the last two, I couldn't have gotten here without y'all. Transferring into the CJ program was daunting. Coming from a social work background, I was apprehensive about fitting in and finding my bearings. From day one, on Zoom, the professors always saw my potential and encouraged (challenged) me to be to be more than just a student, a real scholar. I rarely ever saw myself completing high school, let alone a master's degree. I have never felt more passionate about changing the world and for that, I thank BSU.

Though my time in the CJ department was too short, I have made meaningful connections and strong bonds that I will carry with me in my future endeavors. Dr. Feodor Gostjev, you have been such a wonderful mentor to me. I cannot thank you enough for your flexibility, willingness to chair this thesis (late and mid-semester) and sharing your knowledge in the many roles you held with me over the past couple years. Offering me the Graduate Writing Fellowship has been one of the best learning experiences of my academic career. Your patience, level-headedness, and openness in building a strong writing program for the department has extended past me to benefit all graduate students and faculty. Getting to thrive in your methods and data analysis classes gave me the confidence I needed to pursue more education and complete this research. You are the reason this thesis came to fruition. Thank you for always believing in me.

Dr. Hartsfield, I remember I was first applying to this program. You met with me right at the start of the pandemic and you were so kind to answer my many, many questions about classes, grad school, and the unlimited opportunities at BSU and beyond. I am glad to have taken your advice to “just go for it” because if you didn’t see the capability in me, I likely would have never attempted this experience to begin with. You continue to erase the reoccurring doubt that fills my anxiety-ridden brain. Having you as an advisor and someone who models tenacity throughout the entire program shows me time and time again what strong women in the field are capable of. Though you are inspiring to every ambitious student, you are extraordinary special to me.

Dr. Brissette, you were the first professor I ever had in the CJ department and now also my last. I hope you have seen my growth because you have helped changed my academic performance forever. From writing my first literature review, you guided me (and my skills) to a point of talent. I now can master hard things. When working with other students, I often think about your gentle teaching practices and remember how you treat all students like individuals. You never saw two students alike. That is a practice I have borrowed and never plan to abandon. Your efforts have helped a lot of grad students become better writers, thinkers, and all-around people. You rescued me during a very distressed time, and I think you already know it, but I will always be grateful for your sacrifice to help.

To my gal pal cohort, my fellow CJ graduates that I am now proud to call friends. I regret not connecting with you sooner, but I am glad we made it here together. Given the WILD circumstances of grad school during a pandemic, I appreciate the bonds we have now and stories we will live to tell. Through the triumphs, and some tragic failures

(which I promise, we will laugh about at a later date), you have stood by me, unconditionally. You EMbraced my eccentricity and accepted me for the person I am. We joke about running the department, but I know, it's not an unreasonable dream. We are strong, smart, gifted girlies who are already on our way to becoming the next generation of women in criminal justice. Thank you, Emily, Kat, Kielle, Kristine, Maggie, and Stacy (Rachel too, as an honorary member of the COVID cohort). May we revel in celebration until every last one of us receives the PhD we deserve! 2030?

PREFACE

Juveniles have always occupied a large place in my heart (and mind). As a standing high school career counselor and current high school cheerleading coach, my passions have always stood with youth, specifically adolescents with societal barriers. I devote my academic career to becoming and learning to be the person I desperately needed growing up; someone who touches lives. Someone who turns bad into better and better into best. Life is relative. I know I already made meaningful differences, but we are all capable of doing so much more. I seek to understand the misunderstood populations using my background rich in relatable experiences. The stories I hold are only one perspective on the larger social construction. I want to amplify the infinite truths left to be unearthed.

In this field, it is necessary to be curious. We must dig at the frank issues that hold humanity back. Even if we are uncomfortable. If we want to improve the future, we need confront our weaknesses, our faults, and our mistakes first. I promise to contribute personally, by building strong connections with youth, and professionally, through participation in rigorous academia. This research highlights the limitations to a “universal right” (education) and most importantly, it underscores the struggles faced by vulnerable youth, the younger Em’s waiting for a systematic change. It is fully within our responsibility, and capability, to craft an equitable society loaded with opportunities, adventures, and shared meanings about what is truly good for humanity’s success.

FIGURES AND TABLES

Figure 1: Social-justice Systems Model	3
Figure 2: General Strain Theory Model	38
Table 1: Descriptive Statistics	58
Table 2: Any Detention Regression (Key Variable)	60
Table 3: Length of Detention Stay Regression (Key Variable).....	62
Table 4: Any Judicial Handling Regression (Key Variable).....	64
Table 5: Number of Judicially Handled Cases Regression (Key Variable)	66
Table 6: Detention and Judicial Handling Contact Regression (All Variables).....	68

ABREVIATIONS

CPS	Child Protective Services
CSDE	Connecticut State Department of Education
CSSD	Court Support Services Division
CT	Connecticut
E/BD	Emotional and Behavioral Disorders
GED	General Educational Development
GST	General Strain Theory
HSC	High School Completion
JIC	Justice-Involved Children
JY	Justice-Involved Youth
NLSY	National Longitudinal Survey of Youth
SES	Socio-Economic Status
SPSS	Statistical Package for Social Sciences
USDA	United States Department of Agriculture

TABLE OF CONTENTS

Introduction	1
Literature Review.....	2
Framing Mainstream Institutions	2
<i>Institutional Principles of Juvenile Justice.....</i>	7
<i>Operating Juvenile Justice</i>	8
Contact.....	11
<i>Types of Contact</i>	12
Confinement	13
Non-restrictive	16
Social Services.....	18
<i>Length of Contact</i>	20
Educational Considerations	21
<i>Trends in Education</i>	22
<i>System Contact on Education</i>	24
Graduating	26
<i>Institutional Disadvantage</i>	29
Racial Inequalities	29
Poverty.....	30
Special Education	31
<i>Education and Later Life Outcomes.....</i>	32
Theoretical Framework	34
<i>Strained Experiences</i>	37
Current Study.....	42
Methodology	44
Quantitative Research.....	44
Unit of Analysis.....	45
Sample	46
Data Collection.....	47
Variables.....	48
<i>Dependent Variable.....</i>	48

<i>Independent Variables</i>	49
Any Detention	49
Length of Detention Stay.....	50
Any Judicial Handling.....	50
Number of Judicially Handled Cases	51
<i>Control Variables</i>	52
Gender	52
Race	53
Socio-Economic Status.....	54
Number of Juvenile Offenses	56
Analytic Strategy	56
Results	58
Descriptive Statistics	58
Multivariate Results.....	60
Discussion	71
Detention and Graduating.....	71
Judicial Handling and Graduating	72
Contact, Graduating, and Controls	73
<i>Contact and Graduating: Gender</i>	74
<i>Contact and Graduating: Race</i>	74
<i>Contact and Graduating: Socio-Economic Status</i>	75
<i>Contact and Graduating: Number of Juvenile Offenses</i>	75
Research Question Overview	76
Next Steps.....	77
<i>Policy Implications</i>	78
<i>Future Research</i>	79
Limitations.....	81
Conclusion	84
References	85
APPENDIX A	93

Introduction

The lives of youth in the United States are regulated by a variety of mainstream institutions. Institutions work together to ensure the safety and wellbeing of children who are cannot be fully responsible for themselves. Schools are some of the most important mainstream institutions that, among others, impose societal expectations on youth. In addition to school, the lives and social development of some youth are also implicated by the juvenile justice system. Those youth have unique experiences being involved in the two. Legal contact influences students as both institutions work toward common goals for juveniles. Despite sharing responsibility, these institutions operate vastly different with varying outcomes and measures of success. The intersection of institutions reveals knowledge about the impact of each individual system and the effects of punishment on requisites to long term success.

This study will focus on how the juvenile justice system influences educational outcomes and explore whether and how legal contact shapes high school graduation rates for juveniles with system involvement. Completing high school is necessary for both individual and societal prosperity (Robinson et al., 2017). Further research is needed to address and explain the systematic encounters produced by two mainstream institutions that heavily govern the structure of life for juveniles. Although legal contact is known to carry severe consequences for futures, understanding the way contact with juvenile justice system specifically shapes the prospect of graduating will help make informed decisions about handling complicated youth (Bechtold Beardslee, 2014).

Literature Review

Framing Mainstream Institutions

Mainstream institutions function collectively to provide structure to individual lives. Institutions have a vital responsibility to protect the community and for youth, formal institutions intensely oversee and monitor their wellbeing. Given their extreme vulnerability, a heightened awareness is required when intervening with the development of youth (Hirsch et al., 2018; Robertson & Walker, 2018). The provision of rights and access to government services allows institutions to mandate regulations. Institutions aim to control minors who are under the age of majority because youth are not expected to claim full responsibility for themselves and their actions. There are a variety of formal institutions each with a specific purpose to attend to a certain adolescent need. Schools, social service agencies, law enforcement, as well as mental and healthcare establishments have essential objectives. Although each has its own focus, they seldom operate independently. Together, mainstream institutions aim to meet the most fundamental needs of the youth they attend to.

Overlap across systematic institutions connects life's most important domains (Kelly, 1997; Williamson et al., 2007). Institutions protect and provide for youth to survive and thrive. Multiple institutions are necessary in order to cover the essential parts of welfare. Crossover is a term commonly applied to concurrent involvement with more than one formal institution, typically the addition of juvenile justice (Hirsch et al., 2018). Universal or inclusive institutions constantly oversee all people without being invoked. Example of institutions with universal involvement include schools and healthcare (Maschi et al., 2008). Others, like child protective services and the legal system,

intervene when youth require involvement. Crossover youth, usually referring to justice-involved children (JIC) or justice-involved youth (JIY), are controlled by more than one institution because they exhibit reasons that warrant additional care (Johnston, 2018). Interventional institutions handle youth with abnormal needs because maintaining welfare is a serious obligation. JIC warrant extra support but subsequently, are met with additional regulation as a result.

Maschi et al.'s Social-justice Systems Model

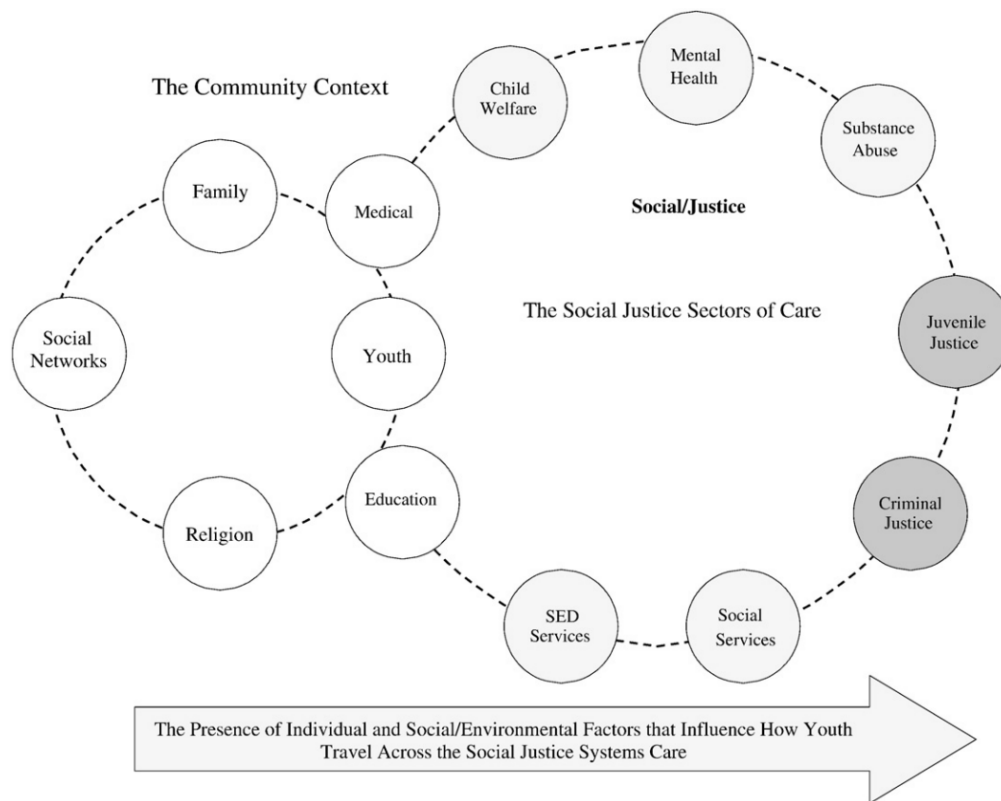


Figure 1: Social-justice Systems Model

In determining how social and environmental risk factors dictate the height of needs for justice-involved youth, Maschi et al. (2008) used a diagram (Figure 1) to illustrate connections between mainstream institutions in social justice systems of care. Youth often traverse through multiple social justice sectors before entering the juvenile

justice system, but every prior involvement is related. Contact with the legal system can be a product of multiple service needs going undetected in prior institutional engagements. The influence of “sectors of care” largely shapes how youth experience future systematic responses to their service needs. (Maschi et al., 2008, pg. 1377). Given the recognized patterns of how justice-involved youth move through institutions and into the juvenile justice system, the design of the social justice sector increases in complexity as youth navigate and are handled through more areas of it.

The greater number of institutional figures simultaneously involved in a youth’s life; the more influence formal institutions have in shaping overall experiences. Distinct categories of human functioning have grand impacts over the life course, especially during maturing years (Cundiff, 2017). The study of the life course examines salient “turning points” within a lifetime in order to explain how prior events shape future ones (Ford & Schroeder, 2010, p. 35). The need for institutional involvement can transpire at any stage. Issues, however, are amplified in the years preceding adulthood because youth have fewer formal demands and added protective agents to shape their everyday life. As a result, institutions intended for minors directly structure experiences and transitions into adulthood.

Secondary to informal institutions which include family and peers, schools are the top influence during formative years of development (Sørli et al., 2021). As the first setting where children experience an early social control by an institution, learning emerges and continues to grow because schools are key to social development. School involvement is a stable presence that remains constant through the major developmental milestones of adolescence (Black et al., 2021). Research identifies schools as leading

institutions that shape the dynamic of the entire population. Though physically minors spend a large portion time in educational settings, other aspects of schools are embedded into society which create standards for future goals.

Due to their heavy influence and predictability on later life outcomes, specifically mental health, competence, and relationships, school experiences are important in explaining pathways over the life course (Johnson, 2018; Sørli et al., 2021). The formal learning provided by schools advances the academic capabilities of a student. The informal learning, provided by structure and exposure to others, is key to developing emotional aptitude (Black et al., 2021). Educational institutions shape a youth's journey through the life course. As one of the strongest indicators of future advancement, schools are responsible for stimulating the intellectual and social needs of youth (Klein & Englund, 2021).

Though schools can be a place of encouragement, they can also stand as a barrier to success. Lee and Cohen (2008) studied the role of educational facilities as producers of adverse life outcomes but also as a coping mechanism to reduce them. As a source of conflict, schools can function as a pipeline to the juvenile justice system. Academic institutions largely control how youth are overseen prior to adulthood. Subsequently, the power of schools and their systemic connections create a funnel that pushes students into being regulated by the law. Problems with students in academic settings can develop into more serious youth issues that are unable to be managed by the capability of schools. Further, schools who do not handle misbehaved students correctly encourage future behaviors that increase proximity to legal institutions (Geis, 2014). The transfer of handling occurs under a process referred to as the school to prison pipeline.

Youth who travel on the school to prison track often do so because schools and the juvenile justice system have intersecting objectives. While schools want youth to succeed, students who do not conform to school regulations are criminalized and pushed out of schools with increased discipline and lack of educational support (Mallett, 2017). These students find themselves leaving school early with little academic capital, high rates of untreated behavior issues, and reduced life prospects (Wald & Losen, 2003). The funneling of students from an inclusive institution to one that is responsible for repairing delinquency can orient youth to engage with the unlawful acts they are predicted to participate in. The school to prison pipeline begins with restricted academic opportunities and results in full exposure to the juvenile justice system due to systematic weaknesses in educational institutions.

Scholars interested in how and what extent schools shape life outcomes use the power of the institution rather than their purpose to account for the heavy influence. While teaching children is an objective, the pressure derived from school mechanisms controls the students who attend. Lee and Cohen (2008) use data from the National Educational Longitudinal Survey to find that schools are noxious environments for children and delinquency. Cundiff (2017) agrees that educational expectations are detrimental and create undue strain on youth. In America, children are required to receive formal education beginning around or before the age of 5 (Black et al., 2021). The burden and legal requisite of attending school puts a great emphasis on the value of education. Attending and completing it is an essential and routine part of life. Following the norms and traditional structure of formal institutions, education is a required demand to live.

Institutional Principles of Juvenile Justice

The United States legal system operates with a separate juvenile sector to differentiate criminal offenses perpetrated by minors. Based on the numeric age, the term juvenile generally describes a person who is younger than age 18 years old. The legal definition can vary depending on state legislation (Closson & Rogers, 2007). Juvenile denotes differences in ability, capacity, and decision making. There is a distinct divide between legal systems with juveniles being viewed as “vulnerable, dependent, and incompetent” and adults “autonomous, responsible, and entitled to exercise legal rights and privileges” (Bonnie & Scott, 2013, p. 158). Juvenile distinctions allow for special considerations that attend to the immaturity of young people who commit crime (Steinberg, 2017). The juvenile system has been adopted with the assumption that adolescents are fundamentally different from adults. The independent sector offers space for the law to provide appropriate measures that account for limitations when responding to juvenile crime.

Development guides the principles of juvenile justice (Monahan et al., 2015). While socialization occurs at all stages of life, social development explains the formal standards expected at certain age intervals. The expansion of maturity can be expressed through areas of social, emotional, cognitive, behavioral, and physical health. Throughout adolescence, development is constantly ongoing. The adolescent brain expands until reaching the full faculty of an adult (Bonnie & Scott, 2013). Deficiencies inhibit the significance about obeying social norms and results in relief of responsibility (Steinberg, 2009). Mainstream institutions that work with youth anticipate immaturity and concentrate on the shortcomings resulting from developmental perspectives.

Scholars and policymakers have debated when maturation actually occurs (Bonnie & Scott, 2013). Though 18 remains the legal standard, research has yet to agree on an age where the human brain reaches the capacity of an adult. Steinberg (2009) observed variations in development as a potential reason for the lack of consensus in the field. Since youth are vulnerable to many influences and development is determined by a number of factors, determining when adolescents fully mature is challenging. Researchers have struggled to identify a particular age of full maturity because growth individually varies by youth and their experiences.

Despite the divergence on a numeric threshold, research suggests that adolescents operate with a limited set of knowledge and an inadequate scope of decision making and cognitive skills. Youth have developmental needs that lower accountability and functioning (Monahan et al., 2015). The juvenile system aligns with the confines expected of adolescents and their lack of functioning which informs why minors engage in criminal acts. The juvenile justice system accounts for numeric age, but also additional limitations, when handling youth who commit crime. By relying on procedures specifically rationalized for the population, juveniles can be handled appropriately and in line with the course of their development (Steinberg, 2017).

Operating Juvenile Justice

The juvenile justice system handles over 2.1 million youth every year (Mallett, 2017). The juvenile justice system manages these minors separate from the traditional adult system because the developmental needs of adolescents require different treatment. Access to the juvenile system is determined by age requirements set forth by state and federal law. Once designated, juveniles are deemed less responsible for behaviors that

lead to legal offenses due to shortcomings in maturity (Closson & Rogers, 2007). While never completely absolving juveniles of guilt, the juvenile justice system handles youth delicately because of potential risks to further harm and the future opportunity to prevent delinquency (Abrams, 2013). The reduced liability assigned to juveniles restricts their ability to make legal decisions about the consequences of their criminal actions. As a result, judges must operate with added sensitivity to balance proper representation of youth and handling juveniles as dependents of the state (Smith, 2005).

Historically, the juvenile justice system has pivoted between two angles in response to the limitations of juveniles. System intervention has shifted between punitive and rehabilitative frameworks to manage delinquent youth. Punishment focuses on punitive measures to discipline youth and has been a guiding principle in both juvenile and adult justice systems. Rehabilitation sees juveniles as malleable and aims to treat them with developmental support conducive to advancing juvenile maturity. Though both attempt to lessen the occurrence of subsequent offenses, rehabilitation has gained increased traction because it handles youth without implying undue harm (Abrams, 2013).

Growing concerns emphasizing basic humanitarian rights for children have permanently pushed the juvenile system toward non-retributive practices (Abrams, 2013). Unlike the punishment model which contradicts juvenile development, rehabilitation views youth as “symptomatic [figures] of deeper...conflicts” requiring response to social concerns (Abrams, 2013, p. 729). Rehabilitative legal responses specifically intended for juveniles affords accommodations that consider the ongoing developmental needs of

youth. Moving to accept rehabilitation, the juvenile system aims to correct behaviors before they become fixed and inadvertently persistent.

There is an “underlying assumption that adolescents are more amendable to interventions designed to deter criminal lifestyles than older offenders who become entrenched in habitual patterns” (Benda et al., 2001, p. 589). When delinquency persists into adulthood, adults are treated without leniency and sentenced with the assumption of being fully developed. Smith (2005) conducted a systematic review of meta-analyses to examine how effectiveness of the juvenile justice system has been measured. Varying interpretations have led to gaping holes in evaluation methods. For interventions, Smith (2005) did not find substantial differences between punishment and rehabilitative models. Programs that demonstrated the most success, however, did address socialization through multiple approaches that directly impact youth. Findings suggest that system effectiveness is a complicated measure but important when determining the future directions of the juvenile justice system.

Benda et al. (2001) convenience sampled 414 adolescents from Arkansas to conduct a longitudinal study on predictive factors of recidivism and adult involvement of serious youth offenders. At age 17, youth in the sample all experienced legal contact but exhibited a 65.2% recidivism rate at the two-year post follow up. Psychological and psychosocial assessments showed pressing consequences for ineffective rehabilitation from the juvenile justice system. Though delinquency during adolescence is linked with chronic criminality, system intervention has the potential to address juvenile offenders prior to adulthood. Making contact prior to the age of majority is imperative but contact is only successful when it genuinely address the problems contributing to delinquency in

youth. In order to protect minors and reduce juvenile offending, rehabilitative interventions must attempt to repair individual contributions to crime.

Sensitivity to developmental needs of juveniles in the system can be observed in sentencing which contains a greater array of options to manage delinquent youth. Judges have additional discretion to make subjective legal decisions and judgements that can result in punishments ranging in length and type (Gupta-Kagan, 2021). Judicial discretion allows legal responses to be determined by the uniqueness of the juvenile offender rather than the offense itself. In order meet the demands of system objectives, juvenile justice extends benefits to minors, preventing system escalation and delicately handling youth. Unlike the traditional justice system for adults, developmental circumstances help set a juvenile framework that provides alternatives for young offenders. The independence of a juvenile sector reminds society of the key abilities and practical limitations of minors when they commit crimes.

Contact

Contact is extended by the juvenile justice system in response to youth who act against the law. It explains how the legal system will be involved when a juvenile commits crime and includes the efforts implemented by the system to address delinquency. Contact is used as a “last resort” to help youth with unlawful behaviors (Maschi et al., 2008, p. 1380). In a single year, it is estimated that over a million youth in the United States have had contact with the juvenile legal system. Of all youth involved in the juvenile justice system, over half experience some degree of longer-term monitoring and other penalties (Gase et al., 2016). The prevalence of experiencing contact is widespread. Invasiveness, frequency, and extent are factors that affect the

delivery of services, but accurate evaluation can be difficult to achieve (Benda et al., 2001).

Smith (2005) reviewed problems with determining how contact is measured in juvenile justice program designs. Studies that focus on contact were found to lack evidence that support the real “intensity and quality experienced by the general run of young offenders” (Smith, 2005, p. 192). Programs that produce significant and positive effects often do not represent the entire system or even other programs measured within the same study. Smith (2005) disagrees with using an effectiveness approach because interventions are equally as complex and unique as the youth they handle. Although system contact has ambiguous definitions that limit the ability to compare features, offenses but also sentencing decisions help categorize what is implemented to compensate for committing juvenile offenses.

Types of Contact

The manner in which contact is delivered can be determined by the prospect of a youth endangering themselves and others or by how serious the offense is. Levels of security assist in deciding what options are available to punish youth. Secure methods add protections that non-secure options cannot. Alternatively, there are benefits to less-secure measures that may aid in the facilitation of rehabilitation (Abrams, 2013). How contact is executed underlines the range in punitiveness and leniency able to be imposed or reduced by the juvenile justice system. Variety in types of contact reveals the opportunity to handle youth according to their developmental needs.

There are three objectives to the juvenile justice system. Safety is the ultimate priority in deciding which objective can be achieved through types of legal contact. In

order, protection of the public and the juvenile, holding youth accountable for their actions, and providing rehabilitation guide the how contact is decided (Maschi et al., 2008). Although environment is often required by the physical threat of a youth, Leone et al. (2017) stresses the importance of considering emotional safety as an equally important requisite to the rehabilitation process. When a youthful offender presents risks that cannot be regulated at home or in the community, physical monitoring, and the ability to restrain if needed, may be necessary. Some youth require a higher level of security based on their offenses or presenting needs. Facilities where youth are fully controlled by the system are reserved for youth who require constant supervision and being kept away from the public society (Gallagher, A. 2014). Rehabilitation uses the least restrictive environment to handle youth, but confinement is applied for serious circumstances.

Confinement. The US Department of Education defines juveniles in confined spaces as an institutionalize population (McFarland et al., 2018). Juvenile confinement produces repercussions that extend further than instantaneous removal from society. In the United States, approximately 48,000 youth are confined to facilities with 21,000 held in these contexts while awaiting trial or placement. As the country with the highest number of confined youths in the developed world, the juvenile justice system uses detention centers to house juveniles in locked and staff supervised environments (Mendel, 2012). Incarcerating minors is a serious decision that increases the size of the juvenile institutionalized population.

Segregating youth is reserved for serious juvenile offenders who pose a threat to themselves and others. Other reasons for confinement include disciplinary, administrative, and medical needs (Gallagher, 2014). Confinement isolates juveniles and

removes youth from their home environments. It also denotes secure, regimented procedures put in place to restrict youth (Mendel, 2012). In order to address dangerous behaviors that contribute to criminal conduct, isolation allows the legal system to assume full custody of a minor. Mandated detention is the most serious response to juvenile crime because confinement is designed to be severe (Gupta-Kagan, 2021; Leone et al., 2017). Methods of confinement have varying levels of security but require youth to be kept away from normal social settings.

Conditions of juvenile detention facilities determine the effects of confinement. While some operate with “correctional hardware such as razor wire, isolation cells, and locked cellblocks” others offer open but monitored living spaces like group homes (Mendel, 2012, p. 6). In either both scenarios, the context and the change from normal environment are often un conducive to adolescent development and requisites of rehabilitation are unmet (Gallagher, 2014; Leone et al., 2017). Gallagher (2014) advocates for the eradication of confinement because isolation is damaging to juvenile brain and social development. The frontal lobe is responsible for impulsivity and decision-making. Physical isolation worsens the condition of the frontal lobe and causes exacerbations in mental illness. Being confined disturbs the command of social skills and encourages anti-social behavior that continues after release. Gallagher (2014) emphasizes the scientific and psychological consequences of confinement citing the use of isolation of juveniles is a direct human rights violation.

For juvenile offenders, confined contact removes access to conventional life experiences with parents or guardians, communities, schools, and peers. Scholars have been particularly interested in restrictive punishments because of the potential and

unnecessary mistreatment of a vulnerable population. Research substantiates the “tumultuous period in human development” for adolescents where cognitive, social, and psychological abilities are underdevelopment (Gallagher, 2014, p. 249) While Smith (2005) found little differences in intervention punitiveness, research agrees confined types of contact can be damaging to youth (McAra & McVie, 2007). Scholars have attributed isolation to have disturbing effects on adolescent emotional wellbeing (Leone et al., 2017). Even short periods confinement has been shown to cause new mental health disorders and exacerbate any existing ones. Human right studies have reported solitary experiences for minors are harmful and traumatizing practices (Gallagher, 2014). Confinement for disciplinary purposes hinders rehabilitative efforts and intensifies the absence of fair justice for youth.

Confinement may be used temporarily for processing or as the primary means of punishment for the courts. Detention, restricting youth in a secure environment is reserved for “sufficiently serious offenders” who present a violent hazard to society (Hjalmarsson, 2008, p. 615). Although objective features can vary, the captive nature of detention can produce trauma. Reduced social stimulation from restricting youth has yet to be found effective for rehabilitating juvenile offenders (Leone et al., 2017). Loss of access to regular communication with family, time spent away from education, and increased exposure to other juvenile offenders creates experiences of deprivation. Sentences of confinement are severe and implemented to prevent youth from committing further harm. Serious punishments like detention have acute effects on emotional wellbeing.

As the costliest burden on the juvenile justice system, confinement, and research regarding it, is concerning (Abrams, 2006). Mendel (2012) describes juvenile incarceration as “wasteful” when non-residential programs offer “better results for a fraction of the cost” (p. 7). Proper socialization during adolescence is imperative to appropriate development. Youth who abruptly stop connect or undergo changes in entire contexts face a heightened risk of becoming permanently unproductive in their adult lives (Brewster et al., 2019). Social disconnection and tension transpire from traumatic, jolting events. Periods of time spent in legal-mandated confinement cease development and impede a youth’s potential to rehabilitate. Imprisonment during the formative years of growth causes irreversible damage to self-motivation and discipline, two key contributors of building a successful future (McAra & McVie, 2007).

Non-restrictive. As a premise of juvenile justice, youth should receive the least invasive type of punishment because attempts to rehabilitate cannot perfectly mediate a “criminal justice process [that] deliberately degrades the offender” (Smith, 2005, p. 194). As an alternative to confinement, non-restrictive contact addresses delinquency in juveniles by providing focused interventions without subjecting a youth to confinement (Access to Information, 2013). The scope of non-restrictive contact is broad. It encompasses a variety of interventions provided through the legal system but does not remove youth from their homes and place them in incarcerated settings. Non-restrictive programs allow youth to remain in familiar environments while working on building positive relationships with others.

Monitoring is an approach where a youth receives supervision but remains in the community (Schwalbe & Maschi, 2009). It may be used to help juveniles transition from

confinement or as the sole consequence for an offense. Other non-restrictive interventions, like community-based corrections and juvenile diversion, encourage youth to participate in rehabilitative programming while preserving degrees of life normalcy, conducive to adolescent development (Loeb et al., 2015). Though non-restrictive contact is still a form of system contact, it avoids placing juveniles in unfamiliar and debilitating circumstances. The addition of alternatives has helped shift the juvenile justice system from a punitive composition to one with a strong emphasis on rehabilitation.

Any non-restrictive alternative to confinement encourages rehabilitation (Schwalbe & Maschi, 2009). Consistent but not 24/7 monitoring concentrates on problematic behaviors to prevent the occurrence of further crime. Research on protective factors with criminal youth shows promising benefits achieved by non-restrictive methods of justice (Abrams, 2006). Research agrees that initial and less-formal exposure to the conventional juvenile justice system tends to yield more positive results in deterrence and desistance (Bechtold, 2014; Sweeten, 2006). Further, non-restrictive contact keeps youth in school to prevent the disturbance of academic progress.

The rate of contact provided by non-restrictive sanctions can be less stigmatizing and support the social and developmental needs of youth (Loeb et al., 2015). Gase et al. (2016) highlight the benefits of non-restrictive contact but notes that effectiveness in programs can vary greatly based on service delivery and reception. Differences in options that do not use confinement tend to range in objectives and outcomes. Since non-restrictive contact still involves meeting objectives and answering to juvenile justice, independent assessments need to correctly summarize success (Smith, 2005). Despite variations in effectiveness, non-restricted contact remains an option for handling

delinquent youth by aligning with developmental considerations (Schwalbe & Maschi, 2009).

Added layers of legal control meets system requisites without subjecting youth to undue harm. Juveniles undergoing restrictions still face implications of contact with juvenile justice system, but they do not suffer being removal from the community. Socialization and social stability are central to forming healthily foundations in youth. Institutionalizing youth is damaging when isolation is used without a justifiable reason to do so. Structured programs that do not employ confinement have been shown to “help rehabilitate children” and promote positive interactions among juveniles of similar nature (Gupta-Kagan, 2021, p. 450). Likewise, the accessibility of external supports offers opportunities to address delinquent behaviors in their natural context without exposing youth to other delinquent peers placed in restrictive confinement.

Non-restrictive contact promotes rehabilitation and can reduce damages or potential risks from confinement measures. Further, research shows that less punitive legal responses can reduce inequalities in the justice system by preventing deeper punishments for disproportionately discriminated against minorities (Schlesinger, 2018). Though it may not solve why some delinquent youths remain subjected to system involvement, non-restrictive contact offers more options for sentencing so confinement is not the only consequence. In addressing problems with confinement, Sweeten (2006) stresses the importance of healing delinquency to decrease the likelihood of reoffending and increase the scope of life prospects.

Social Services. Types of contact can be defined by where the youth reside while experiencing system intervention. Contact can also refer to the type of handling when

responsibility is transferred to another mainstream institution. Social services are interconnected with juvenile justice because child maltreatment has a positive correlation with system involvement (Maschi et al., 2008). The child protection system, or child protective services (CPS), in the United States is relevant to contact as juvenile offenders are regularly exposed to both systems (Abrams, 2013). Juveniles with legal system involvement often find themselves involved with social welfare agencies due to intersecting risk factors that warrant concern of more support.

Child protective services is another mainstream institution that intervenes when necessary. Not every minor is involved but those who do come in contact with CPS tend to have serious need. Hirsch et al (2018) describes youth with CPS experience as dually-involved. Social services and the juvenile justice system have shared goals and methods of control. Together, they collaborate for the benefit of youth. Qualities contributing to delinquency can align with conditions that qualify attention from CPS. Some juveniles become dually-involved through initial legal contact while others enter the justice system with prior social service exposure. In both scenarios, the two systems act as controlling figures in the everyday lives of youth dictating how they are handled. Hirsch et al (2018) found that adjudicated youth with an open welfare case showed higher levels of educational risk and accessed less mental health care. Despite demonstrating the need for more services, involvement with multiple institutions did not provide the appropriate services expected with double supervision.

Issues affecting delinquency in youth are complex. The social services profession argues for more collaboration between institutional agencies because youth who have been abused or neglected also struggle to navigate social norms (Mallett, 2017). Social

workers have been integrated into the legal system, but some suggest CPS should be involved with every juvenile offender (Abrams, 2013). Crossover from juvenile justice to the child welfare system can be provided through diversion. McAra and McVie (2007) examine evidence-based practices where CPS involvement is required for youth involved with the juvenile justice system. Diversion to social services, assigning a youth to CPS instead of handling through the justice system, was found to be the most effective method to reduce juvenile offending out of all legal sentencing options. It is important to note the recommendation was based off an international system that has greater means to decriminalize and destigmatize youth offenses. The gradation of punitiveness, however, exists in the United States as well. Transferring responsibility and deflecting action from the courts may alleviate the burden of system contact and can become an advantageous response to juvenile crime.

Length of Contact

Punishments implied by the juvenile justice system are challenged to meet the developmental needs of adolescence. Since development is an ongoing process, addressing delinquency has a time-sensitive component. More importantly, matching consequences to the behaviors committed by juveniles can result in various lengths of sentences. With youth, length of contact can describe the amount of time spent actively under control of the legal system, whether confined, supervised, or a combination of both (Gase et al., 2016). Contact is implied for varied lengths that prescribe how long involvement will occur. Sentences vary greatly because youth circumstance and development are discrete (Steinberg 2009). Since youth can commit more than one offense, involvement can be quantified by the overall, collective period of time

implicated by the juvenile system. Multiple incidents during legal minority creates challenges for measuring length of system contact in youth. Data generally captures the timing of initial interaction, but consistent documentation of final contact is limited by factors of youth aging out.

Research to reform juvenile policy regarding the introduction of contact has shown that the slightest exposure to the formal sanctions leads to reduced high school completion rates and other negative educational outcomes (Gupta-Kagan, 2021; Sweeten 2006). Legal officials are highly concerned about the structure of the juvenile justice system because the timing of convictions directly affect unsuccessful diversion and reoffending (Bechtold Beardslee, 2014). Though records for minors become sealed after reaching legal adulthood, system effects remain with youth. Once no longer eligible for the juvenile justice system, individuals begin adulthood. Despite the potential of a clean record, experiences from involvement continue to persist in everyday life functioning. The length a youth spends involved can affect long-term prospects of graduating.

Educational Considerations

A high school diploma is considered an educational standard in mainstream American society. As a prerequisite to further career pursuits, it is one of the best predictors of conventional life success (Cundiff, 2017). Research supports the necessity of graduating high school for young people who aim to escape poverty and reduce adverse adult outcomes. Further, adequate education levels produce substantial benefits to society by encouraging self-sufficiency (Qu & Hahn, 2016). High school completion (HSC) determines the number of opportunities later afforded to young adults and beyond. On the other hand, dropping out or failing to complete any form of high school

equivalency, carries a significant set of negative effects (Rahman Forhad, 2021; Robinson et al., 2017; Sweeten, 2006). The consequences of dropping out damage individual prosperity and future outlooks.

Trends in Education

Completing high school signifies successful achievement of elementary and secondary education. The purpose of these schools is to “facilitate the development of youth’s capacity to be successful and productive members of society” (Maschi et al., 2008). Over the past 40 years, the status dropout rate of youth who abandoned school, has declined from 14.3 to about 6.5 percent. Simultaneously, the high school completion rate of youth who obtained a high school credential, increased to 92.4% (McFarland et al., 2018). Although more students are staying in school and later completing it, those still failing to finish, continue to represent a portion of the school population.

A general education development (GED) is a recognized equivalent offered to assess an individual for the custom standards of a high school degree. Both presume a completer reached an educational threshold and is trained to an agreed upon level of academic preparedness. Often career-oriented, the infrastructure of educational institutions trains students for the rigor of a stable and sustainable future. The end of high school remains a customary benchmark in the life course, signifying readiness to handle the approaching responsibilities of adulthood (Qu & Hanh, 2016). While academic skills are intended to develop scholarship, schools also offer opportunities to advance social maturity. As a societal condition for advancement, youth are obligated to complete high school with pressure stemming from multiple forces.

Though high school graduation rates have steadily increased, and dropout rates declined, education is still a concern for at-risk youth (Brewster et al., 2019; McFarland et al., 2018). A 2018 report on US dropout rates noted failing to complete high school initiates deep monetary losses, higher incidence rates of institutionalization, and hefty economic costs to society over time (McFarland et al., 2018). Though prospects for high school graduates have remained substantially high, equivalency credentials are deemed unequal. Research shows alternatives like GED's are favored to having no recognized education credential but only when cognitive skill levels of the dropped-out student present high. High school graduates, however, were deemed the most valuable type of student in the workforce and experienced greater financial prosperity after controlling for factors that contribute to dropping out (Murnane et al., 2000). The outlook for equivalencies is less, but the destructiveness of dropping out without an alternative has increased access to alternative programs that allow students to complete high school in unconventional ways.

In recent years, college and other forms of specialized training have developed into demands to enter the professional workforce (Cundiff, 2017). The need for education beyond high school solidifies the necessity of a high school degree. Large, extremely disadvantaged areas remain inundated with over 50% of students severely struggling to complete school. Research has shown that economically disadvantaged urban areas suffer with generations containing severely underemployed or unemployed citizens. A lack in proper education is directly correlated to unproductive economic outcomes. Poor academics, inadequate resources, and dropping out were also tied with poverty, contributing to underprivileged dynamics (Robinson et al., 2017). Urban regions endure

the largest effects of education defects with large disparities rising against suburban counterparts.

Educational leaders need solutions that address the school inequalities across America. While some schools are thriving with students graduating, others are permanently deteriorating with students dropping out. Gaps in the education system discourage students from learning (Robinson et al., 2017). Despite advancing expectations for the conventional school model, and pathways to success, graduating high school remains a significant, but challenging milestone. As a life event that aligns with the transition to legal adulthood, it has demonstrated its importance in the life course (Natsuaki et al., 2006). Completing high school has solidified into a measure of societal individual aptitude. In order to use graduation as a benchmark determining chances at life success, the problem of inequitable student attempts at the education system must be addressed first.

System Contact on Education

While schools are a mainstream institution that serves all youth, the juvenile justice system only handles a percentage. The experience of contact with both formal institutions can offer a perspective on institutional influences (Hjalmarsson, 2008). Legal contact adds a structural force that governs the daily and long-term endeavors. Further, it affects youth's position as a student and adolescent. Individual encounters with the legal system in addition to the standing requisite of education forms an intersection between institutions. Exploring the connection between mainstream institutions helps illuminate the problems youths face while attempting to graduate.

Longitudinal research has been conducted to follow youth and determine what happens to juveniles following justice system contact. Studies have primarily focused on more general life outcomes and neglected to address educational attainment and the completion of degrees (Sweeten, 2006). Most attention has been devoted to reoffending and labor market consequences with some investigation on life satisfaction (Benda, 202; Klein & Englund 2021). Measurements of adult life are influenced by education. Given the power of degrees on later life outcomes, schools are an interesting source of inquiry to evaluate juveniles immediately after release.

Education can be used to gauge success because in addition to providing insight into experiences of adolescence, it is highly foretelling of adult outcomes (Hein et al., 2017). The typical academic profile of juveniles who are or have been involved with the juvenile justice system is grim. Cavendish (2014) surveyed academic levels across core subjects for justice-involved children (JIC). Findings showed JIC score significantly lower scores, one to five years below average grade level, than non-justice-involved youth. In addition to challenges with yearly grade completion, youth with histories of legal involvement performed intellectually lower on standardized test score that are required to graduate. Academic weaknesses are evenly spread across mathematics, reading comprehension, and writing fluency, the fundamental areas of learning (Baron et al., 2022; Cavendish, 2014). Core proficiencies are the first skills to be learned in schools, yet research suggests they are the first to be hindered by system contact. In mediating the handicaps of legal contact, increasing basic literacy and math instruction can address the prohibitive effects of system involvement (Reed, 2014).

Graduating. Research using high school graduation as a significant life event is scant (Hjalmarsson, 2008; Natsuaki, 2006). Sweeten (2006) directly measured educational outcomes for youth who faced legal system contact. Focused on graduating, arrest and court involvement were explored to understand the high school careers of juveniles. Using the 1997 National Longitudinal Survey of Youth (NLSY), variations in experiences showed unfavorable effects on graduation. Court involvement was substantially damaging to the outcome of graduating compared singular police arrest with no further legal contact. Formal sanctions decreased prosperous opportunities for youth with prior criminal records. Additionally, lost in-school learning time and exposure to contact with other delinquent youth led to the development of weak school attachments and perceptions of insignificance towards the role education. Sweeten's (2006) research piloted the investigation of high school educational attainment for juvenile offenders. The results question the causation of instructional fallout and encourage informal handling. Unfortunately, the selection of variables neglects to fully investigate the how youth experiences differ between types of contact and how differences affect the probability of graduating from high school.

While Sweeten's (2006) research introduced the topic of atypical pathways to graduation, scholars still questioned the findings due to the complicated individual characteristics associated with both system involvement and low educational outcomes (Hjalmarsson, 2008). Since personal factors were not thoroughly examined, Hjalmarsson (2008) expanded on Sweeten's (2006) study to gain further knowledge about external influences, in addition to system contact. Using the same dataset, NLSY, Hjalmarsson (2008) identified secondary effects from different types of contact. Despite negating a

casual effect, some correlation between graduation and juvenile incarceration was found. Findings showed length of contact to be less connected to incarceration effects and more influenced by secondary factors such as timing and age of initial contact. Despite mixed analyses, stronger evidence was found that reinforced a negative correlation between contact and high school graduation. After controlling for some unobservable situational factors, the strength of the relationship between system contact and graduating remains debated due to the growing number of alternative influences continuing to be recognized by developing research.

Mulcahy and Leone (2012) attempt to address the underlying factors of confined system contact on education. The intensification of learning gaps is mainly attributed to inadequate instruction received while separated from traditional schooling. In considering the quality of education offered in correctional facilities, meeting the needs of each individual learner is difficult to achieve. State and federal governments regulate academic requirements, but universal expectations create even more barriers for involved youth to succeed. Results from a conventional school model operated by the juvenile justice system ignore the complex learning deficits of juveniles. The design of mainstream institutions may work together but cannot compensate for the absence of one another. Justice-involved students, for reasons directly related to legal involvement and indirectly due to institutional circumstances, are oriented to fall short academically compared to their non-involved peers.

More recent studies have measured the effects of lost academic progress caused by excessive time spent detained or in confinement. Poor school performance is a recognized pathway to problems with graduating. Obtain a high school degree after

system involvement is limited. Cavendish (2014) emphasized the viability and importance of interventions that mediate legal contact on immediate disruptions of learning. Strategies to support transitions back into academic settings from confinement can supplement many elements academic progress, with credit recovery being a top priority. Juveniles who immediately returned to school after spending any amount of time in a legal institution increased their odds to graduate by 1.7 times (Cavendish, 2014). Youth who took additional time out of school following post-release had fewer prospects to eventually complete high school. The depth in needs for justice involved youth begs for additional considerations on both systematic fronts. The juvenile justice system must educationally support juveniles while schools can develop options for youth to be put on a reasonable, but steady track to graduate.

In discerning how to help JIC graduate, a major limitation to Cavendish's (2014) study was the selection of outcome variables deemed successful in the analysis. The General Education Development (GED) was defined as a measure of educational success, but scholars recognize firm differences in the choice of measurement. Since attendance is not a mandatory to receive a GED but generally is a requirement to achieve a high school degree, the experiences of youth attempting to gain an equivalency is not truly reflective of satisfying high school demands. On the other hand, academic competencies required by both outcomes offer reasonable rewards to youth hindered by confinement. Combining the outcomes together and deeming a diploma and GED as comparable highlighted the societal value of high school completions (HSC). The study design did not contrast the opportunities afforded to youth who obtained different versions of HSC. Overall Cavendish's (2014) findings emphasize the promising assessment of academic

achievement, regardless of associated title. The damaged path to securing educational substance following system contact leaves room for scholars to answer how to improve it.

Institutional Disadvantage

Getting all youth to graduate is difficult. In addition to justice-involved students (JIS), other demographics conflict with how youth experience school. Similar to other large societal institutions, schools are “plagued by vast inequalities” (Wald & Losen, 2003, p. 9). The effects targeted hardships are magnified in education given the strength and power of schools. Students of non-traditional backgrounds, those of minority race, low-income status, and involved with special education, are often affected by dominant school culture which subjects youth to struggle. These students face challenges while navigating an institution that was not designed to meet the diverse set of needs accompanying the student population. Having educational barriers creates a difficult path to be successful in schools. System involvement combined with any systematic disadvantage, discourages the prospect of graduating for youth (Robertson & Walker, 2018).

Racial Inequalities. Inequalities can be seen across education and the juvenile justice system (Schlesinger, 2018). Specifically in regard to race, non-White youth are disadvantaged in every social institution at rates significantly higher than White counterparts (Mallett, 2017). In the one hundred of the United States’ largest city school districts, schools with high minority percentages have 58% less students graduate. Concurrently, schools across the United States also discipline minority youth the most (Wald & Losen, 2003). The academic prospects for diverse student groups are widely inaccessible compared to the opportunities for students who attend predominantly white

schools. Racial disparities inhibit the how youth of color access the benefits of education with minority students structurally disadvantaged along the way.

Within non-White groups, African American and Hispanic youth are overrepresented in the school to prison pipeline. Although Black and Hispanic students represent 42% of the school population, they account for 72% of school-related arrests in the juvenile justice system (Mallett, 2017). Students who experience problems in school are at a greater risk of encountering system contact during adolescence. While research shows that academic difficulties and behavioral issues can lead to contact with the legal system, students of color are overwhelmingly prone to struggle with these predictors (Robertson & Walker, 2018). Institutional overlap prevents minority students from succeeding with less opportunities to access education and graduate.

Poverty. More than one in every five students grow up in poverty (Mallett, 2017). Economic scholars have examined the financial prospects of graduating in order to encourage educational pursuits (Qu & Hahn, 2016). The financial background of students is important to consider when identifying their academic options to succeed. Low-income students are shown to have decreased odds of graduating with increased representation in the juvenile justice system (Mallett, 2017). Socio-economic status can determine the number of resources available to a youth, the quality of their education, and the likelihood of experiencing additional hardships related to financial instability (Wald & Losen, 2003).

Poverty affects how youth exist and persist through mainstream institutions. Studies show that when areas designate more money to support students in schools, increased means reduce adult crime (Barron, 2022). Improving criminal outcomes

requires school districts to have the financial capital from their community in order to support it. With poverty being tied to greater delinquent outcomes, the juvenile justice system sees more youth from areas that lack financial stability and experience gaps in school quality (Mallett, 2017). Greater instances of system handling and academic inadequacies in low-income areas produce an overrepresentation of minorities in the justice system and reinforce the school to prison pipeline.

Special Education. Disabilities complicate the relationship between the juvenile justice system and schools because both institutions limit the prospects of youth who experience them (Geis, 2014). The percentage of youth with disabilities in the juvenile justice system is far greater than those receiving special education in schools. While 13% of the school population are comprised of students with disabilities, the prevalence of disabilities for incarcerated juveniles stands between 30-80% (Reed, 2014). Students with learning disabilities experience higher rates of system involvement. These youth are two to three times more likely to offend both in school and outside of it. Further, they have higher recidivism rates compared to their peers (Mallett, 2017). Although the total of students in special education is more than juveniles with disabilities in the justice system, schools are inclusive institutions that are prepared to handle diverse learning needs. The legal system, on the other hand, is not designed to meet those demands but is overwhelmed with students needing special education services. Juvenile system contact is confounded by the prevalence of disabilities that contribute to special education students having difficulties with graduating high school (Reed, 2014).

The type of disability also contributes to the prospect of academically succeeding. Reed (2014) found that youth having emotional and behavioral disorders (E/BD), often

coincides with delinquency and juvenile incarceration. Youth with E/BD “have the lowest graduation rates of all children with disabilities” (p. 2). Only half of students with E/BD graduate high school and 38% drop out prior compared to students with other types of disabilities who have a 64% graduate rate. Geis (2014) reports that students who are eligible for special education services drop out at four times as likely to drop out before system contact. Reed (2014) and Mallett (2017) demonstrate that avoiding system contact and graduating with a disability are both difficult feats. The addition of system involvement increases the likelihood that a youth with disabilities will not graduate (Reed, 2014).

Education and Later Life Outcomes

Dropping out of school, with or without juvenile delinquency, can encourage serious adult offending and lead to limited labor market opportunities later in life (Murnane et al., 2000; Natsuaki et al., 2006). Conversely, delinquency originating in adolescence can be identified early in the life course to gauge potential offending and the risk of education difficulties. The severity and onset of juvenile offenses are factors that influence both outcomes (Hein et al., 2017). Studies show, as early as middle school, basic temperament has been used a risk indicator for dropping out and adult criminality (Robinson et al., 2017). Since dropping out of school has been found to be associated with increased criminal behavior, there are important elements between educational disruptions and offending (Cavendish, 2014; Ford & Schroeder, 2010; Swisher & Dennison, 2016).

Though research on graduation and dropout rates can be seen as inverses, scholars research them as separate outcomes that measure effects of system contact on youth. Geis

(2014) noted that “one in every 10 young male high school dropouts is in jail or..detention” (p. 882). Since education has “large crime reducing effects”, more attention has been devoted to dropping out over graduating because failure to complete high school generates adverse issues for long term prosperity and offending (Amin et al., 2016, p. 2). Nationally representative data shows that a high percentage of adult crimes are committed by high school dropouts (Cavendish, 2014). Youth who drop out are inclined to endure collective shortcomings, resulting in economic and additional legal hardships.

In examining early indicators of poor life attainment, the display of young aggressiveness overlaps with students who are ill-informed about the consequences of dropping out. Youth who fail to acknowledge or agree with notion that education leads to success, are predisposed to experience serious difficulties first in school and in other areas in life (Robinson et al., 2017). Subsequent issues include includes long term criminal offending. Natsuaki et al. (2006) studied the completion of high school as a major life event on the development of criminal careers. For youth who display concerning behaviors later in adolescence, graduating has the potential to arbitrate chronic offending (Ford & Schroeder, 2010). Natsuaki et al.’s (2006) study identifies schools as opportunities to improve future outcomes. The connection between education, crime, and success are tightly interconnected to youth moving through school systems (Baron et al., 2022).

Longitudinal research demonstrates the gravity of undesirable educational decisions made during adolescence. While schools are primary grounds to form connotations about graduating, families make significant contributions to youth perceptions. Swisher and Dennison (2016) used Add Health data to study pathways of

crime from intergenerational education attainments. Findings affirm negative educational outcomes have striking and persistent effects on life course offending and beyond. Crime predicted for youth who do not complete high school is implicated by parental education level. Failed attempts at the United States education system can fuel delinquency in later offspring (Mulcahy & Leone, 2012; Rahman Forhad, 2021). Positive experiences reveal promise for children whose parents graduated. Scholastic success and lasting familial stability are outcomes generated when youth are able to complete school. The magnitude of graduating, or failure to, is highly prominent in determining future outcomes for those beyond oneself. Robison et al. (2017) recognizes the subjective value of education and recommends reinforcing favorable views to reduce further crime.

Academic outcomes are serious indicators of societal and systematic health. Though all educational accomplishments are positive, high school completions have the most effect on reducing crime (Amin et al., 2016). The challenging factors involved with justice-involved youth and the density of expectations surrounding education makes the ability to graduate incredibly difficult. Although education is a requisite of success suggestive by prosperity and desistance, it is a restricted option for youth with justice system contact. Consequences of the juvenile justice system exemplify the need for youth to attend and complete high school in order to enhance the prospect of later life outcomes.

Theoretical Framework

Previous literature has primarily relied on labeling theory to explain effects of the juvenile justice system contact on education. Labeling theory distinguishes how social rules dictate the way actions are perceived. Individuals who act against the rules are often

assigned labels that contain adverse reactions to deviancy (Bowers, 2000). Explicit and implicit associations from events deemed negative infringe on subsequent areas of life for youth who experience them. Labels from system contact, and societal reactions because of them, impact how youth are able to navigate life after involvement. Social responses to contact with the juvenile justice system include isolation and undesirable treatment from other members (Rankin Mahoney, 1974).

Labels felt in educational spaces can also be a result of system contact. Research has identified two paths that connects school and the justice system. First, labels assigned by institutions socially construct juvenile deviance (Bowers, 2000). Opportunities become restricted for youth labeled with a history of system contact and juvenile's future conduct can be seen in a negative light (Rankin & Mahoney, 1974). Attitudes connected to involvement hold dispirited connotations. In schools, justice-involved youth may be perceived as dangerous or exceptionally needy (Sweeten, 2006). Doubt in academic ability and intelligence is a frequent assessment of justice-involved students. System contact affects how youths are understood in other institutional settings and alters the conventional school experience.

Second, abnormal treatment from formal institutions can stimulate secondary deviation in which juveniles possess delinquent assessments regarding themselves (Bowers, 2000; Rankin Mahoney, 1974). Adolescent characters are highly susceptible to external forces. System involvement can affirm negative self-image and generate additional deviancy. Youth who are told and treated as a criminal, may develop into or act in a way that conforms to their newly assigned deviant label. Though system contact aims to prevent further offending, identifiers used to organize and handle youth influence

a juveniles' perception of their own position in society. Most importantly, labeling youth results in stronger self-assessments of deviancy compared to non-involved peers (Sweeten, 2006).

In addition to labels, there are a number of similarities across youth who break the law and youth who fail to meet expectations in other important social contexts (Monahan et al., 2015). With school failure, or non-completion, theories of propensity suggest that students who struggle academically have similar qualities to youth who are involved with the juvenile justice system. Educational factors are powerful predictors of juvenile delinquency and justice system involvement. For youth who experience abuse and neglect, school performance is a serious concern. Robertson and Walker (2018) found themes of propensity are highly salient in disadvantaged youth. Juveniles who are Black, male, involved with CPS, and experience school difficulties have an increased likelihood to experience youth court contact. Though social factors heavily contribute to delinquency, poor academics are found to be a leading predictor of juvenile justice system involvement. Dropping out, failing a grade, or displaying chronic absenteeism result in strikingly higher rates of arrests and referrals.

Overlap between undesirable occurrences is often explained by mutual forces. Factors involved with poor school performance, like learning disabilities and poverty, parallel predictors of aggressive and disrupted behaviors, traits that contribute to juvenile offending (Mallett, 2017). Robertson and Walker's (2018) research suggests that unfavorable societal outcomes are not only conditionally based on factors, but closely related through adverse juvenile characteristics. Negative commonalities directly affect

adjacent social contexts as youth become entangled by causal traits that limit successful participation in mainstream institutions.

Strained Experiences

While labeling theory offers useful support juvenile justice system contact resulting in negative educational consequences, it fails to consider some of the important experiences that may increase the risk of both criminal justice sanctions and dropping out. Strain theories may offer a reasonable path to explore routes between juvenile justice and education. Classical strain theories describe the channels by which individuals seek to achieve conventional goals. When legitimate options are not attainable, illegitimate methods are explored in attempts to continue meeting desires and satisfying the feelings of frustration and anger (Agnew, 1985). In relation to juveniles, delinquency results from youth seeking alternative, but unlawful, channels to access success because traditional, lawful, paths are inaccessible.

Classical strain theories have focused on societal demands, and the incompetence to meet them, to explain crime. General strain theory (GST) adds to prior strain theories by attributing individual circumstances to “have a cumulative effect on delinquency” (Agnew & White, 1992, p. 477). GST considers the development of negative but internal associations when youth: (1) fail to achieve positively valued goals, (2) lose positive stimuli, and (3) are exposed to negative stimuli (Agnew, 1992). Strains emerge from disjointed connections and accumulate into a force that drives delinquent behaviors as a response to handling the stress (Agnew, 2001). Agnew (1985) expanded the applicability of prior strain theories and created GST to address the limitations of existing work.

Through examining how juveniles respond to different circumstantial situations, general strain theory was developed to account for more types of strained experiences.

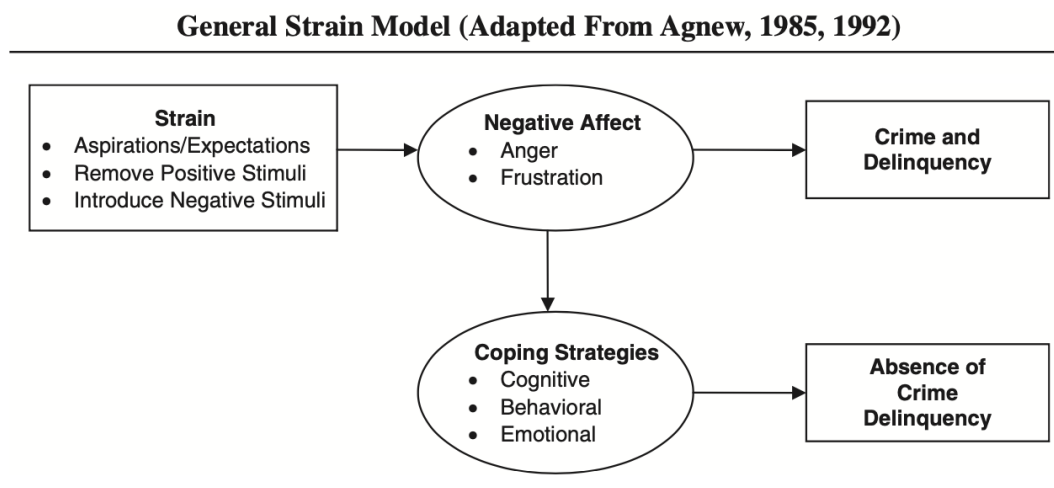


Figure 2: General Strain Theory Model

The general strain model (Figure 2) illustrates how delinquency develops from experiences. Negative affect is the result of all types of strain and exists regardless of the addition or absence of coping strategies. The presence of coping strategies determines if anger and frustration will be redirected away from crime and delinquency. When absent, negative affect can lead to juvenile crime and contact.

Research conducted by Lee & Cohen (2008) shows that normal responses to harmful experiences include negative affect. In the model, crime and delinquency are only one outcome of strain. The presence of coping strategies can mediate the effects of strain, allows youth to handle stress, and produce an outcome without crime and delinquency. The absence of positive elements to deter consequences of strain can result in juvenile crime and delinquency. Coping strategies are highly regarded in GST as they

have the potential to counteract human responses to strain. Without an intermediary, instances of strained experiences may cyclically result in exposure to the legal system.

Contact with the juvenile justice system can be both a result of, and a cause of further strain. Prior research has looked at adolescents in aversive environments having higher rates of delinquency (Agnew 1985). Adverse experiences of contact may lead youth to face more system interactions because they exhibit greater delinquent behaviors. They also, however, may represent strains developed from conditions of involvement. Strains produced leading to contact and strains produced as a result of it require further exploration. General strain theory has been tested in a few areas related to school and juvenile delinquency, but it has not been applied to strained relations with other mainstream institutions from contact.

Lee and Cohen (2008) used the National Educational Longitudinal Survey to analyze how schools act as a source of strain and as a coping mechanism between strains and delinquency. Findings show some support that schools are places of strained experiences. Schools where delinquent behaviors were highly problematic demonstrated stronger outcomes of delinquency in other students who did not previously show delinquent behaviors. As far as reducing the effects of strain, schools were also able to mediate the production of delinquency when providing positive atmospheres. The findings suggest that schools play a number of roles in GST's development of delinquency. Overall, Lee and Cohen (2008) found strong evidence that school mechanisms and contexts are related to creating strain and fostering strained experiences.

In considering formal institutions with life regulating features, Agnew's (2001) definition of objective strains applies to the pursuit of education having past encounters

with system involvement. Objective strains are experiences that are conventionally unwelcomed and disliked. The first domain of strain emphasizes the necessity achieving goals deemed positive by society. Education is an esteemed achievement and requisite of success yet academic opportunities are stunted both during involvement and as a result of it (Cundiff, 2017). In line with notions of labeling theory, barriers developed from contact hinders a youth's ability to actively reach educational goals in comparison to traditional, non-involved, students. Limitations place upon justice-involved youth extend past the loss of time physically learning academic settings and include stigmatized treatment from academic figures. System contact blocks educational pathways which become difficult to improve when challenges are presented for youth post-release.

Agnew (2001) looked at a variety of strains and found that "hassles" with school produce delinquency (p. 324). Poor academic performance alone did not lead to future crime but failure to reach societal expectations was sustained as a powerful source of strain. Obstruction of long-term projections, like reduction in earning potential, are closely related to the academic requisites of graduating. Agnew's (2001) study did not identify how weak strains may be components of strong ones. Since types of strain have yet to be directionally applied toward future pursuits, the cumulative nature of events that do and do not contribute to delinquency may be more related than originally explored. Under a GST framework, educational achievement of positively valued expectations is heavily restricted after experiencing juvenile justice system contact.

GST also finds the last two domains, removal of positive stimuli and addition of negative stimuli, contributive to strain development. Even within a rehabilitation framework, punishments are intended to correct delinquent behavior and contradict what

youth regard as positive and negative. The removal of positive stimuli is expressed by the loss of something once valued. In exploring GST's applicability to outcomes of involvement, deprivation and forfeiture of privileges are relative effects of contact. Agnew (2001) discusses the weight of objective strains on youth. While system contact of any form is unpleasant, confinement imposes the most harm (Smith, 2005). Youth in isolation miss social interactions that are necessary for proper social development. Even youth with non-restrictive contact may still lose the ability to socialize with desired peers in line with certain terms of supervision. The removal of positive stimuli aligns with the system's intent to address delinquency but may also stand as a source of strain for who encounter it.

The final domain of strain, exposure to negative stimuli, can be viewed through interactions that deliver damage through contact. Among social circles, youth who are exposed more delinquent youth through involvement are at an increased risk of experiencing events that can lead to strain. Theories of propensity suggest that juveniles involved with the legal system are susceptible to having prior negative experiences (Monahan et al., 2015). Youth entering the system may arrive with an array of behaviors that are disadvantageous to others. Forced exposure to delinquent youth can create circumstances of strain through the introduction of harmful stimuli (Agnew, 1992). In addition to peer-level stimuli, exchanges between youth and justice administrators as power antagonists can further induce feelings of strain. While disagreeable relations could largely increase levels of day-to-day stress, reflections about contact as an experience can damage beliefs about the system may impose negative principles about other mainstream institutions. For juveniles who consider their treatment, or sentence,

unfair, legal contact magnifies the intensity of acquired strain (Cundiff, 2017).

Connecting impressions across mainstream institutions, exposure to negative stimuli through contact may help illustrate how experiences from involvement inhibit youth from graduating due to the crossover of hostile emotion.

Institutional crossover reveals direct areas to examine strain. Scholars have realized the usefulness of GST to study ‘the relationship schools have with delinquency’ but have yet to formally test strains in the opposite direction (Lee & Cohen, 2008, p. 118). While there is some evidence to support that contact manufactures strain, there is very little research that considers the outcomes of strained experiences from system involvement. Cundiff (2017) measured academic expectations on deviant coping strategies in young adults using GST and found strong correlations of strain stemming from school. A directional general strain theory test is needed to measure strained experiences from contact on graduation, or education, instead of crime or delinquency. Since GST does not require all three sources in order to yield delinquency, scholars should begin to explore the existing features of the juvenile justice system to identify how underlying strains that affect other opportunities in other systems.

Current Study

Previous research has devoted a substantial amount of attention the consequences of different types of juvenile justice system contact. Scholars continue to examine justice-involved juveniles because some forms of punishment can increase the risk of other critical social problems and the persistence of delinquency. Connections between mainstream institutions are often overlooked when examining the aftereffects of justice system contact. Research shows that system involvement affects experiences with

education and the long-term consequences contour what success looks like for justice-involved youth. Sweeten (2006) and Hjalmarsson (2008) examined the effects of arrest and incarceration on high school graduation rates. They found a negative correlation between contact and graduating. The impact contact with the juvenile justice system determines the number of educational and life opportunities afforded to youth. Concepts of general strain theory can help describe the personal experiences acquired because of involvement which can be applied to endeavors in subsequent institutions.

The current study aims to investigate the effects of juvenile justice system contact on high school graduation rates. Detention and judicial handling will be explored to expand on previous studies that examined other interactions. However, this research will consider the damage produced by involvement to reveal information about juveniles interacting with educational institutions post release. Research is needed to understand limitations formed through system contact and the pathway to graduation because of it. Concepts of strain theory suggest that negative institutional encounters can create implicit suffering. Juveniles may return to school with strained experiences that impact academic achievement. Knowing that graduating high school is conducive to prosperous life outcomes, understanding how institutional crossover shapes the path to graduation for youth can help juveniles successfully approach education and guide legal administrators consider how legal contact is applied.

Methodology

Previous studies have measured features of the juvenile justice system and educational outcomes (Hjalmarsson, 2008; Sweeten, 2006). This exploratory study uses secondary and longitudinal data from Trends in Juvenile Criminal Case Processing and Education, 2006-2012, Connecticut to investigate how types and length of contact influence high school graduation rates. The current study conducts a quantitative analysis to evaluate the research question and produce findings contributable to the field. The methodological design addresses the strengths and limitations of prior studies that were previously successful in exploring relationships of similar nature. Building on the research of Sweeten (2006) and Hjalmarsson (2008), a new dataset of juvenile court and education records from Connecticut will help to further explain experiences of justice-involved youth attempting to graduate.

Quantitative Research

The current study engages in quantitative research due to previous designs of related studies and the type of data available to perform the necessary analyses. Sweeten (2006) and Hjalmarsson (2008) conducted studies with comparable research questions asking how arrest, court intervention, and incarceration affect high school graduation rates. Both employed quantitative research methodology to determine how involvement and unobservable characteristics affect high school education, respectively. The present dataset, Trends in Juvenile Criminal Case Processing and Education, 2006-2012, Connecticut, contains secondary information from state court and education records. Though the collection of data includes a variety of measures, variables that generate the

research question, excluding demographics, can be measured appropriately using the quantitative data points.

There are methodological considerations in electing for a quantitative approach. All research includes a degree of uncertainty however, doubt can be mediated by study designs that increase validity. Quantitative research allows researchers to interpret inquires with confidence as long as data reliability is not of high concern (Franklin, 2022). A quantitative approach can produce more knowledge about individual experiences and perceptions of youth. Quantitative methods are helpful when designating a research avenue with minimal prior research (Nath Baral, 2017). Given the lack of attention surrounding high school outcomes from legal system contact, quantitative research on the subject can begin to establish a pathway for future study.

Unit of Analysis

Youth are the main focus for the current study. As the intended unit of analysis for inquiry, juveniles are the commonality between education attainment and court involvement. Although some juveniles encounter multiple intervals of contact, instances of involvement can only identify the frequency of juvenile experiences. Likewise, degree completions neglect to account for individual effects produced between institutions. Measuring youth allows the current study to discern between contact and graduation results. The research question asks how juvenile contact shapes one's own prospect of graduating. Youth as the unit of analysis bridges the connection between institutions and allows the current study to investigate educational outcomes shaped by strains created through involvement.

Sample

Trends in Juvenile Criminal Case Processing and Education, 2006-2012, Connecticut provided 58,678 participants to consider for the current study. The original sample included every youth who had juvenile justice system contact in Connecticut between January 1, 2006, and December 31, 2012 ($n = 58,678$). To be included in the original collection, a participant must have had at least one instance of contact between the six-year time frame. Demographic information was collected on all system-involved juveniles within the state and offense records were collected on those having court involvement. Education records were pulled for youth included in the original study.

The current study contains 13,731 participants, a portion of the original dataset with a reduced sample size ($n = 13,731$). The current sample is attributed to some participants in the original dataset lacking values measured by the dependent variable. Youth missing an educational outcome of graduating or dropping out were excluded from the current study. Effects of system contact on graduation could not be evaluated for youth did not have any identifiable information on school completion. In selecting the dependent variable, the sample size required condensing because the full sample contained unclear information on whether the excluded youth graduated. If youth experienced system contact during the collection window but aged out prior to determining an educational outcome or transferred out of state, that information was not included in the original sample and was eliminated by reducing the sample. The secondary data provided by the original study only contained data for youth whose system contact and educational outcome both occurred between 2006-2012. Any contact

or graduating occurring outside the study timeframe was unable to be measured and not incorporated into the current study.

Data Collection

Trends in Juvenile Criminal Case Processing and Education is a longitudinal dataset on justice-involved youth in Connecticut from 2006-2012. Compiled by Elena L. Grigorenko (2018), principal investigator, the dataset includes 16 files of statewide court and education records for all juveniles who committed at least one offense between January 1st, 2006, and December 31st, 2012. The Connecticut Judicial Branch, Court Support Services Division (CSSD) contributed 9 files. The sample size of the original dataset was determined by pulling demographic information for all juveniles with offense records during the study timeframe (N = 58,678). The remaining data from CSSD files were accessed based on availability. The Connecticut State Department of Education (CSDE) supplied the remaining 7 files to complete the dataset. Education data was paired to juvenile court records using individual identifies with a 93% match rate. All data collected was assigned a unique Client Personal Identification Number to assist with linking the state files.

It is important to note that modifications were made that pertain to the recording of juvenile system information in Connecticut during the duration of collecting data. Between 2006-2012, two adjustments expanded the upper limits of the juvenile age distinction used by the state. Throughout the changes, data was collected as normal. Contact with the juvenile justice system continued to be used as the primary requisite to be included in the dataset. State legislation extending age restrictions for the juvenile

system use can affect the demographics of youth included in the sample and the results produced by the study findings.

Variables

Defined variables are needed to measure how contact with the juvenile justice system affects high school graduation rates. Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012 contains information on juveniles from court and education records. After the data provided by the two state sources were merged, one dependent variable, four independent variables, and four control variables were selected. Given the availability of data collected offered by dataset, these variables were used to structure the current study based on their applicability to address how juvenile justice system contact affects high school graduation rates. Measures of academic outcomes, system contact, and individual factors will help explicate the relationship between mainstream institutions for youth.

Dependent Variable

This study is curious about educational outcomes, specifically the completion of high school. In order to measure high school attainment, graduation rates can discern between youth who complete and do not complete the degree. Within the dataset, Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012, educational data was provided by Connecticut State Department of Education (CSDE) files. Mobility contained information about school transference within the state. Exittype was used to track student's location and movement through academic institutions, including graduation. For the purposes of this study, high school completions were coded dichotomously into two categories: Dropped out (0) or Graduated (1). Though more

information about transfers was available, the current study seeks to examine final attainments of the degree. Since students who move between schools and programs will ultimately either graduate or not, all transfers were excluded from the sample. Graduation is the only dependent variable included in the current study. Completing high school or dropping out were the only two options measured within the dependent variable.

Independent Variables

Four independent variables were selected from the dataset to describe measures of juvenile justice system contact. Detention and judicial handling were measured through two methods. First the current study examines if any detention or judicial handling affect graduation. Any contact provides insight on juvenile encounters with the system. It then investigates how the magnitude of effects within detention and judicial handling influence graduation rates. Length of detention stay and number of judicially handled cases helps to understand how youth handle greater degrees of contact.

Any Detention. Detention is the “seclusion of a detained person in isolation from others” (Gallagher, 2014, p. 247). Though detention is a legal response to juvenile crime, not all juvenile offenders experience it. For those that do, detention can be measured by exposure to confined experiences. Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012 provided data on youth detention from Connecticut Judicial Branch, Court Support Services Division (CSSD). The variable Any Detention was created from Detention Stays to determine which contacts with the juvenile system included any detention. DTNStayLength contained information about the length of stay in detention centers as an interval ratio variable. Data from DTNStayLength was translated into a new dichotomous variable Any Detention with two categories, youth

who ever experienced detention and those who never did. First, youth who had no stays, 0 days in detention, remained No detention (0). Youth who had more than 0 days in detention were all recoded to Yes, detention (1). Any Detention was created to determine if experiences with detention-type contact affect high school graduation rates.

Length of Detention Stay. Length of stay was examined separately from having any detention. In addition to determining if detention affects graduation, how detention affects graduating requires individual attention. The quantity of time spent in detention can reveal differences about the experiences of youth who spend varying periods in confinement. Studies have found that time spent away from school hinders the ability to successfully complete it (Cavendish, 2014; Mulcahy & Leone, 2012). Intervals of detention can assist in understanding the extent of detention on educational outcomes. The variable Length of Detention Stay was available through DTNStayLength and did not have to be recoded. This variable includes the participants who spent time in detention and measures how many days they spent in detention in Connecticut.

Any Judicial Handling. When youth commit criminal offenses, juveniles can be handled in a number of ways. Discretion in the juvenile justice system allows for handling that ranges in degree of judicial management (Gupta-Kagan, 2021). How juveniles are handled is determined by a number of factors but can be classified by formal and informal oversight. According to Connecticut state law, the state where the data was collected from, handling is determined by a juvenile probation supervisor. This role governs whether a juvenile is handled judicially through court intervention or non-judicially with alternative means. All “cases involving felonies and other serious offenses must be handled judicially” as well as youth with previous judicial handling and those

who have committed more than two delinquent acts (Access to Information, 2013, para. 3). Juvenile law in Connecticut outlines which youth and offenses require judicial handling.

Judicial handling was studied to determine if exposure to the overall justice system affects graduation rates. Trends in Juvenile Criminal Case Processing and Education CSSD files included information about the legal contact experienced by juveniles. The file Juvenile Offenses provided CaseHandling which measured how offenses were assigned by the juvenile probation supervisor. Data was originally collected as: Judicial (1), Non-Judicial (2), and Mixed (3). The current study is interested in mainstream institutions. In order to identify formal encounters with the juvenile justice system, CaseHandling was recoded into a new dichotomous variable to reflect ever having judicial contact between 2006-2012. The new coding for Non-Judicial (2) and Mixed (3) was combined to No judicial handling ever (0). The code for having any Judicial handling ever remained (1). According to the dataset, youth with more than 60 offenses were not include in CaseHandling and were separated into a file that contained information on the serious and chronic youthful offenders.

Number of Judicially Handled Cases. Examining the amount of judicial handling provides can help answer how the frequency of interactions with the juvenile justice system shapes graduation rates. If youth have judicial handling, the number of times they do is valuable information to characterize experiences of overall involvement. Court intervention induces higher level legal responses, such as formal trials and sentences (Access to Information, 2013). How often a youth faces the seriousness of

judicial handling is vital in discovering the effects of it. Number of Judicially Handled Cases addresses the frequency of judicial system contact in relation to graduation rates.

The extent of judicial handling undergone by participants will describe the intensity of relationship between youth and the juvenile justice system. Adding graduation as an outcome will help determine the pathway between mainstream institutions. CaseHandling included case information using following codes: Judicial (1), Non-Judicial (2), and Mixed (3). A new variable was created that classifies how many cases of contact were handled by the Connecticut juvenile court system. By counting the total number of cases coded for each participant, Number of Judicially Handled Cases was used as an independent variable to test the effect of judicial handling quantity on the outcome of graduating.

Control Variables

Controls are important to consider when assessing unbiased correlations. Youth in the juvenile justice system and in schools are confounded by many individual and situational dynamics (Monahan et al., 2015; Robinson et al., 2017; Robertson & Walker, 2018). In order to study system contact on graduation rates, factors that contribute to both juvenile justice system involvement and school performance must be controlled first. This study elected for four control variables to prevent contaminating potential casual effects between the independent variables and graduating (Hünernmund & Louw, 2020). Gender, race, a measure of socio-economic status and a measure of delinquency are included in analyses performed by the current study.

Gender. Gender is standard control variable “strongly related to education attainment” (Hjalmarsson, 2008, p. 625). Justice system research has predominantly

focused on involvement with young males to study the juvenile population (Sweeten, 2006). Despite a preference to examine boys, accounting for gender can help isolate the impact of system contact on graduation rates without clouding the effects of being male. The Demographics file from CSDD provided gender information on participants included in the sample. Males were coded as 0 and females were coded as 1. No further recoding was necessary.

Race. Participant race is another control deeply tied to educational outcomes of graduating (Hjalmarsson, 2008). Racial categories were pre-determined by the dataset, Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012, which accessed race records from CSDD. ClientEthnicity originating from the CSDD Demographics file offered four categories for race: American Indian/Alaskan Native (1), Asian/Pacific Islander (2), African-American (3), and White (4). Preliminary data cleaning reveal that recoding was necessary due to the large percentage of race data that was missing. The codebook did not specify if participant race was self-identified or determined by CSDD however the large amount of missing data suggests it was collected indirectly.

The recoding process included creating an additional category for missing and combining the categories of non-White. Data from ClientEthnicity was separated and recoded into three new dichotomous variables: White, Non-White, and Missing. The White variable combined American Indian/Alaskan Native, Asian/Pacific Islander, African-American, and missing data into (0) while White was recoded independently into (1). The Non-White variable had the same recode process except White and missing participants were coded (0) and American Indian/Alaskan Native, Asian/Pacific Islander,

African-American were coded together as (1). Finally, the Missing variable separated those whose race was missing from the dataset from those who had a race indicated.

Missing was coded by grouping American Indian/Alaskan Native, Asian/Pacific Islander, African-American, and White as (0) and isolating missing as (1).

Hispanic ethnicity was collected as a separate measure in the original dataset. It was not included in the recoding of race because ethnicity contained a large amount of missing data. Adding Hispanic as a racial category would have increased the number of youths in the missing control. Further, since it was collected in addition to race, ethnicity complicates how participants are classified between racial groups. Combining ethnicity and race would count some youth more than once within the same variable. Without creating another control for ethnicity, the current study did not account for participants who, for example, were identified as White but also had a Hispanic or missing ethnicity. Given the potential for overlap and misrepresentation of participants' race in the controls, ethnicity data could not be included in the current study.

Socio-Economic Status. The National School Lunch Program is a social welfare program facilitated by the United States Department of Agriculture (USDA). Free and reduced lunch provides nutritious meals to children of low-income households through local schools. Eligibility for the free and reduced lunch program indicates low socio-economics status. The USDA requires families eligible for the program to have family-size income levels under federal poverty guidelines. Though financial guidelines adjust yearly, the threshold for free lunch is 130 percent and 185 for reduced (USDA Food and Nutrition Services, 2017). Eligibility requirements for free or reduced lunch is determined by household income.

The dataset provided one measure of socioeconomic status (SES) for participants included in the sample. Student eligibility for free or reduced priced lunch was recorded yearly by the Connecticut State Department of Education (CSDE). Each academic year contained its own eligibility data for students during the 6-year data collection window, year 2006-2007 to year 2012-2013. Recoding allowed for overall SES information to be obtained. Yearly data from FRL_0708, FRL_0809, FRL_0910, FRL_1011, FRL_1112, and FRL_1213 were recoded into six new variables. Missing (0) remained Missing (0) while Reduced (1) and Free (2) were combined to reflect eligibility for either (1). Missing continued to reflect no eligibility however Yes (1) indicates being eligible for the free or reduced lunch program. The 6 recoded variables were then combined to generate a collective variable with codes that summarize no years of eligibility (0) and number of years eligible greater than 1 (1-6). Number of eligibility years was recoded once more to create a SES variable that determines if a participant had any eligibility between 2006-2012. After combining all participants with 1 or more years, the final dichotomous variable measures if a participant was ever eligible for free or reduced lunch during the data collection window. No eligibility ever was coded (0) and any participants with at least one academic year of eligibility were coded (1). Students eligible for more than one year or those who alternate between free and reduced eligibility are still represented by (1). Recoding and merging years were necessary to address duplications in the data. Although there is not an exact measure of financial status for every participant, those showing eligibility of the free or reduced lunch program can be assessed as coming from a household with low income, below the poverty line.

Number of Juvenile Offenses. Prior studies examining the juvenile justice system contact and outcomes of graduating control for adolescent delinquency (Hjalmarsson, 2008; Natsuaki et al., 2006, Sweeten, 2006). Youth who are involved have similar propensities to students who drop out of school (Robertson & Walker 2018). In order to examine contact, separate from juvenile delinquency, the current study needs a measure of control that accounts for individual behavior. Controlling for tendencies that contribute to both the dependent and independent variables can help differentiate which features of contact later impact graduation rates. An appropriate control will represent levels of deviancy without explaining the type of contact or handling experienced.

Number of Juvenile Offenses was extracted from CaseHandling provided by the CSDE data files. CaseHandling records how the offenses were handling for youth included in the sample. Offenses are recorded by type: Judicial (1), Non-Judicial (2), and Mixed (3). A new interval, ratio variable was created that counts the total number of juvenile offenses across CaseHandling data per participant. The Number of Juvenile Offenses variable expresses how many of offenses were committed by each participant but not how they were handled. As a control for extensive contact, it represents how often a youth had encounters with the juvenile justice system of any kind. Focusing on the effects of contact after it is experienced, controlling for reoccurring offenses limits the contribution of excessive delinquency on educational outcomes.

Analytic Strategy

The dataset was presented in a format that was ready to merge. After reducing the sample size, additional cleaning and recoding prepared the quantitative variables for analyses. Court and education records from Trends in Juvenile Criminal Case Processing

and Education were analyzed through Statistical Package for Social Sciences (SPSS) software. SPSS is a common tool used for social science research and is particularly useful in quantitative studies. The user-friendly program allows researchers to conduct a multitude of statistical tests and is “optimal” for determining correlations (Puteh & Hanafi, 2017, p. 19). SPSS can perform comparison and correlation tests using one or more variables but would not be appropriate for a theory test.

This research advances Sweeten (2006) Hjalmarsson’s (2008) studies on arrest and graduation which both employed regressions determine findings. After determining an appropriate statistical test, the use of SPSS and logistic regression were selected to fulfil the needs of the current study’s research question. Logistic regression is used when several dichotomous and interval-ratio variables are tested to see changes in a categorical binary variable (Puteh & Hanafi, 2017). In addition to four control variables, the four independent variables of contact were applied to the single dependent variable of graduating. SPSS conducted multiple logistic regression analyses to discern how juvenile justice system contact affects the high school graduation rates of youth. Multiple logistic regression reveals individual and cumulative influences of system involvement. Further, the elected analytic strategy yields interpretable results and relevant findings on educational outcomes.

Results

Descriptive Statistics

Table 1. Descriptive Statistics (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012)

Variables	Percent/Mean (SD)
<i>Dependent Variable</i>	
Graduated?	
Yes	77%
No, dropped out	23%
<i>Independent Variables</i>	
Any Detention	
Yes	13.3%
No	86.7%
Length of Detention Stay	11.17 (53.85)
Any Judicial Handling	
Yes	50.7%
No	49.3%
Number of Judicially Handled Cases	2.08 (3.969)
<i>Control Variables</i>	
Gender	
Male	51.1%
Female	40.9%
Race	
White	43.7%
Non-White	22.8%
Missing	33.5%
Free/Reduced Lunch (SES)	
Yes	18%
No, never reduced or missing	82%
Number of Juvenile Offenses	3.19 (3.98)

Note: n=13,731

Table 1: Descriptive Statistics

Table 1 contains the descriptive statistics. The results suggest that 77% of participants graduated from high school while 23% dropped out. Contact is measured by detention and judicial handling. 13.3 % of participants experienced detention between 2006-2012. 86.7% did not experience any detention during that time frame. Length of

detention stay had a mean of 11.17 days with a standard deviation of 53.85 days. 50.7% of participants experienced judicial handling while 49.3% had no judicial handling indicated within the dataset. Number of judicially handled cases had a mean of 2.08 cases with a standard deviation of 3.969 cases.

Gender, race, socioeconomic status, and number of juvenile offenses were measured for control variables. The sample (n=13,731) consists of 51.1% males and 40.9% females. 43.7% of participants were identified as White, 22.8% Non-White, and 33.5% missing from the dataset. To highlight socioeconomic status (SES), 18% of participants were eligible free or reduced lunch at least once between 2006-2012. 82% were never noted to be eligible for the free or reduce lunch program at any time during the sample timeframe. Youth in the sample averaged 3.19 juvenile offenses with a standard deviation of 3.98.

Tables 2-6 show the results analyses of multiple logistic regression predicting graduation rates. Tables 2 and 3 focus on detention while Tables 4 and 5 look at judicial handling, each as key variable models. Table 6 combines all independent variables. In the regressions, Tables 2-6, Model 1 uses a bivariate model with only independent variable(s) and the dependent variable, graduation. Model 2 continues to examine independent variables and graduation but includes controls for gender, race, socio-economic status, and number of juvenile offenses. For gender, Male is used as an omitted category. The race omits White.

Multivariate Results

Table 2. Multiple Logistic Regression Predicting Graduation (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012).

Key Variable-Detention (Any Detention).

	Model 1	Model 2
Any Detention (vs. None)	-1.199(0.052)** <i>0.302</i>	-0.834(0.065)** <i>0.434</i>
Female		0.288 (0.044)** <i>1.334</i>
Race (vs. White)		
Non-White		0.049(0.06) <i>1.05</i>
Missing		-0.567(0.05)** <i>0.567</i>
SES		-0.425(0.047)** <i>0.654</i>
Number of Juvenile Offenses		-0.052(0.006)** <i>0.95</i>
Constant	1.408(0.023)	1.867(0.046)
R-square	0.036	0.065

Note: Unstandardized coefficients with standard errors in parentheses and odds ratio in italics.

(n = 13,731)

* p<0.05 ** p<0.01

Table 2: Any Detention Regression (Key Variable)

Table 2 examines whether detention affects graduation rates. Model 1 includes a measure of any detention experienced by participants with none used as an omitted category. The results suggest that participants who have been detained were $b=-1.199$ less likely to graduate than those who have never experienced detention. The coefficient is statistically significant ($p<0.01$). The odds ratio suggest that compared to participants without detention, those who experienced any detention-type contact had 0.0302 lesser odds of graduating.

Model 2 re-examines the relationship between detention and graduating while statistically controlling for gender, race, socio-economic status, and number of juvenile offenses. Overall, results in Model 2 suggest that while controlling for individual

influences that explain some of the correlation between experiencing detention and graduating, the relationship between variables remains statically significant ($p < 0.01$). After factoring in controls, participants with any detention were $b = -0.834$ less likely to graduate with an odds ratio of 0.434 compared to participants with no detention ever. In Model 2, analysis on gender showed females with detention were $b = 0.288$ more likely to graduate than males with detention at 1.334 more odds. Non-White participants were $b = 0.049$ more likely to graduate than White youth with detention but the results were not statistically significant. Participants with Missing for race showed a $b = 0.567$ negative correlation with 0.567 lesser odds of graduating compared to White participants. The socioeconomic control suggests participants with detention who were eligible for free or reduced lunch were $b = 0.425$ less likely to graduate than those also with detention but never eligible for the program. Odds ratio suggests low socioeconomic status with detention reduces graduation odds by 0.654. Number of juvenile offenses showed a $b = -0.052$ negative correlation with graduating. For every recorded juvenile offense, the odds of a youth graduating with detention decreases by 0.95. All other control variables were statistically significant ($p < 0.01$) except Non-White for race which was not statistically significant at all.

Table 3. Multiple Logistic Regression Predicting Graduation (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012).

Key Variable-Detention (Length of Detention Stay).

	Model 1	Model 2
Length of Detention Stay	-0.004(0.0)** <i>0.996</i>	-0.002(0.0)** <i>0.998</i>
Female		0.334 (0.044)** <i>1.396</i>
Race (vs. White)		
Non-White		-0.032(0.059) <i>0.986</i>
Missing		-0.575(0.05)** <i>0.562</i>
SES		-0.441(0.047)** <i>0.643</i>
Number of Juvenile Offenses		-0.081(0.006)** <i>0.642</i>
Constant	1.267(0.021)	1.864(0.046)
R-square	0.012	0.055

Note: Unstandardized coefficients with standard errors in parentheses and odds ratio in italics.

(n = 13,731)

* p<0.05 ** p<0.01

Table 3: Length of Detention Stay Regression (Key Variable)

Table 3 shows the results of length of detention stays on graduating. Model 1 considers the time participants spent in detention, if any at all. The results suggest length of detention has a $b=-0.004$ negative impact on graduating. The effects are statistically significant ($p<0.01$). Odds ratio shows that for every day a youth stays in detention, the likelihood of graduating decreases by 0.996 compared to youth who spend no time in detention at all.

Model 2 also looks length of detention stays on graduation rates but introduces controls for gender, race, socio-economic status, and number of juvenile offenses. It indicates a $b=-0.002$ negative relationship that is statistically significant ($p<0.01$). After accounting for controls, the odds ratio suggests that for every day a detention stay is increased, likelihood of graduating decreases by 0.998 odds compared to stays of no

days. Female participants had a $b=0.332$ positive effect on graduating compared to males with the same length of detention stay. For Non-White youth, length of detention stay decreased graduation rates by $b=-0.032$ however the results were not statistically significant. Results for participants whose race was missing indicate a $b=-0.575$ negative correlation with graduating. For every day a participant with Missing race spends in detention, their odds to graduate declines by 0.562 compared to White youth with the same length of stay. Length of detention stay by socioeconomic status show $b=-0.441$ lower graduation rates for youth who were eligible for free or reduced lunch at least once. The odds ratio suggests that an increase detention stay length by one day reduces graduation rates by 0.642 for youth of low socioeconomic status. Increase in the length of detention stay also decreases the likelihood of graduating by $b=-0.081$. Odds ratio shows that after controlling for number of juvenile offences, increasing length of detention stay reduces the odds of graduation rates by 0.642. Non-White race was the only control variable not found to be significant. All other control variables showed statistical significance ($p<0.01$). The results of detention stay length in Models 1 and 2 reveal a negative correlation between number of days spent in detention and graduating, with and without variable controls.

Table 4. Multiple Logistic Regression Predicting Graduation (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012).

Key Variable-Judicial Handling (Any Judicial Handling).

	Model 1	Model 2
Any Judicial Handling (vs. None)	-0.799(0.042)** <i>0.45</i>	-0.571(0.047)** <i>0.565</i>
Female		0.256 (0.045)** <i>1.292</i>
Race (vs. White)		
Non-White		-0.026(0.059) <i>0.974</i>
Missing		-0.6(0.05)** <i>0.549</i>
SES		-0.448(0.047)** <i>0.639</i>
Number of Juvenile Offenses		-0.066(0.052)** <i>0.936</i>
Constant	1.656(0.042)	2.155(0.052)
R-square	0.027	0.064

Note: Unstandardized coefficients with standard errors in parentheses and odds ratio in italics.

(n = 13,731)

* p<0.05 ** p<0.01

Table 4: Any Judicial Handling Regression (Key Variable)

Table 4 measures the occurrence of juvenile judicial handling in relation to graduating. Model 1 includes a measure of any judicial handling with none as an omitted category. Model 1 suggests that experiencing any judicial handling reduces graduation rates by $b=-0.799$ compared to participants who have never experienced it. Odds ratio indicates that those with judicial handling have 0.45 less odds to graduate than those with no judicial handling ever. The results of Model 1 are statistically significant ($p<0.01$).

Model 2 combines the measure of judicial handling with controls of gender, race, socio-economic status, and number of juvenile offenses. Results of Model 2 indicate a $b=-0.834$ negative relationship between judicial handling and graduating after statistically controlling for individual influences. The odds ratio suggests those who are handled judicially have 0.434 less odds to graduate compared to youth who have never been

judicially handled when including control variables. Female participants were $b=0.288$ more likely to graduate with judicial handling compared to males. Females are at 1.292 greater odds to graduate than males when both genders have the same judicial handling. Race controls found being Non-White decreases a youth's likelihood to graduate by $b=-0.026$. However, the results for Non-White control were not statistically significant. Being in the Missing race category showed $b=-0.6$ less graduations and reduced participants' odds of graduating by 0.549 compared to those in the White category. Testing socio-economic status, eligibility for free or reduced lunch $b=-0.448$ decreases graduations. Odds ratio suggests that compared to students who were never eligible to receive free or reduced lunch, youth of low socio-economic status have 0.639 less odds to graduate when judicially handled. The number of juvenile offenses $b=-0.066$ lessens graduation rates for youth who have been judicially handled. For every added juvenile offense, the odds ratio of a juvenile graduating with judicial handling reduces by 0.936 odds. All coefficients for Models 1 are statistically significant ($p<0.01$). All variables in Model 2 showed statistical significance ($p<0.01$) except the Non-White control.

Table 5. Multiple Logistic Regression Predicting Graduation (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012).

Key Variable-Judicial Handling (Number of Judicially Handled Cases).

	Model 1	Model 2
Number of Judicially Handled Cases	-0.088(0.005)** <i>0.916</i>	0.035(0.015)** <i>1.036</i>
Female		0.34 (0.44)** <i>1.405</i>
Race (vs. White)		
Non-White		-0.058 (0.059) <i>0.944</i>
Missing		-0.584(0.05)** <i>0.644</i>
SES		-0.44(0.047)** <i>0.654</i>
Number of Juvenile Offenses		-0.123 (0.015)** <i>0.884</i>
Constant	1.415(0.005)	1.914(0.047)
R-square	0.025	0.054

Note: Unstandardized coefficients with standard errors in parentheses and odds ratio in italics.

(n = 13,731)

* p<0.05 ** p<0.01

Table 5: Number of Judicially Handled Cases Regression (Key Variable)

Table 5 analyses the number of judicially handled cases per participant on graduation rates. Model 1 independently considers how many times a juvenile's case is handled judicially and their outcome of graduating. The results show that the number of judicially handled cases has a negative $b=0.088$ effect on graduation. It also shows statistical significance ($p<0.01$). Odds ratio reveals that for every case handled judicially, the odds of graduating decrease by 0.916.

Model 2 continues to measure the number of judicially handled cases while statistically controlling for gender, race, socio-economic status, and number of juvenile offenses. Results suggest that the number of judicial handling has a $b=0.035$ positive effect on graduation rates. The amount of judicial handling remains statistically significant ($p<0.01$) in Model 2 after integrating control variables to account for some of

the correlation. Odds ratio shows that for every added judicially handled case, the odds of a youth graduating rises by 1.036. Being female increased graduation rates by $b=0.34$. Odds ratio supports female participants having 1.405 more odds to graduate than male participants with the same number of judicial handled cases. Race, using White as the omitted category, showed a $b=-.058$ negative effect on graduating and a reduction in odds to graduate by 0.944. Participants in the Missing race category also demonstrate reduced graduation rates of $b=-0.123$. The odds to graduate for those with Missing as their race is 0.654 less than those who are identified as White. Low socio-economic status drops graduation rates by $b=-0.44$ and shows statistical significance ($p<0.01$). Eligibility for free and reduced lunch decreases a youth's odds to graduate by 0.654. Controlling for the number of juvenile offenses, the number of judicially handled cases shows a $b=-1.123$ reduction in graduation rates. The odds ratio suggests that for every additional juvenile offense committed, the prospect of graduating reduces by 0.884 among youth who have the same number of judicially handled cases. All variables in Model 2, except Non-White, showed statistical significance ($p<0.01$) when controlling for individual demographics that account for some of the correlation. The Non-White was not statistically significant.

Table 6. Multiple Logistic Regression Predicting Graduation (Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012).

All Variables-Detention and Judicial Handling.

	Model 1	Model 2
Any Detention (vs. None)	-0.818(0.069)** <i>0.441</i>	-0.782(0.072)** <i>0.457</i>
Length of Detention Stay	0.0(0.0) <i>1.0</i>	0.0(0.0) <i>1.0</i>
Any Judicial Handling (vs. None)	-0.484(0.049)** <i>0.616</i>	-0.719(0.054)** <i>0.487</i>
Number of Judicially Handled Cases	-0.019(0.006)** <i>0.981</i>	0.19(0.018)** <i>1.209</i>
Female		0.268 (0.45)** <i>1.308</i>
Race (vs. White)		
Non-White		-0.022 (0.06) <i>1.022</i>
Missing		0.61(0.05)** <i>0.543</i>
SES		-0.4(0.047)** <i>0.67</i>
Number of Juvenile Offenses		-0.203(0.017)** <i>0.816</i>
Constant	1.663(0.033)	2.359(0.059)
R-square	0.046	0.079

Note: Unstandardized coefficients with standard errors in parentheses and odds ratio in italics.

(n = 13,731)

* p<0.05 ** p<0.01

Table 6: Detention and Judicial Handling Contact Regression (All Variables)

Table 6 combines the presence of detention, length of detention stays, juvenile judicial handling, and the number of judicially handled cases to determine how system contact affects high school graduation rates in youth. Model 1 includes measures of all four independent variables. Results suggest that participants who experience detention, using none as an omitted category, show $b=-0.818$ less graduations than participants never having detention ever. The coefficient is statistically significant ($p<0.01$). The odds ratio suggests that compared to no detention, youth who have detention contact have 0.441 less odds of graduating. In Model 1, length of detention stay had no effect on

graduation rates and was not statistically significant. For every additional day of detention, there is no change in the participant's odds of graduating. Having judicial handling, using none as the omitted category, showed $b=-0.484$ fewer graduations. The relationship is statistically significant ($p<0.01$). Compared to youth with no judicial handling, those who have been judicially handled had 0.616 less odds to graduate. The number of judicially handled cases in Model 1 indicates a $b=-0.019$ negative relationship with graduation. Showing statistical significance ($p<0.01$), for every judicially handled case, the odds of graduating decreases by 0.981 in combination with all independent variables of detention and judicial handling.

Model 2 continues to examine the relationship of contact variables on graduation rates but adds statistical controls for gender, race, socio-economic status, and number of juvenile offenses. Having detention showed a $b=-0.782$ negative effect on graduating and remained statistically significant ($p<0.01$). The odds ratio for juveniles with detention, considering all control variables, suggests that youth with detention experiences have 0.457 less odds to graduate than youth who have never experienced detention at all. Identical to Model 1, length of detention stays in Model 2 showed no change. The results of Model 2 for number of days youth stay in detention is not related to changes in graduation rates as has no effect on graduating. The relationship is also not statistically significant. The odds ratio indicates identical odds when including the other independent variables and controls. Having judicial handling while accounting for influences that affect the correlation suggests $b=-0.709$ less graduations than no judicial handling. The results are statistically significant ($p<0.01$). Compared to participants who have never been judicially handled, the odds of a youth graduating with judicial handling is reduced

by 0.487. The number of judicially handled cases suggests a $b=0.19$ positive correlation with graduating. The coefficient is statistically significant ($p<0.01$). For every judicially handled case, a youth's odds to graduate increases by 1.209 when accounting for other features of contact and individual controls. Gender examination also increased graduation rates for females with statistical significance ($p<0.01$). Females showed 0.268 more graduations than males after including all independent variables and other controls. Race in Model 2 suggests negative effects on graduating. Non-White participants had $b=-0.022$ less graduations but the relationship is not statistically significant. Participants in the missing race category, with White as the omitted option, had $b=-0.61$ less graduations and was statistically significant ($p<0.01$). Compared to White participants, missing race information reduced odds to graduate by 0.543. The socio-economic variable suggests a $b=-0.4$ decline in graduation rates. With statistical significance ($p<0.01$), those who are eligible for the free or reduced lunch program have 0.67 less odds to graduate in combination with the independent contact and control variables. Number of juvenile offenses has a negative $b=0.203$ decline in graduations and a statistically significant ($p<0.01$) effect on graduation rates. Odds ratio indicates that for every juvenile offense, the odds of graduating reduces by 0.816.

Discussion

Although youth continue to be studied extensively in the juvenile justice field, educational outcomes are not explored as a consequence to system contact. This study produced findings in line with the previous literature but also revealed new information about academic outcomes of contact with the juvenile justice system. Sweeten (2006) and Hjalmarsson (2008) conducted research on features of juvenile arrest and high school degree attainment. Those studies found contact to be prohibitive of graduation. With some exceptions, this study supports prior findings of legal involvement hindering youth's academic success. Overall, after experiencing certain types of contact with the juvenile justice system, the likelihood of graduating high school is decreased. Given the consequences of dropping out, system contact, and the limitation of educational pursuits because of it, hinder future prospects for youth. The current study explored how detention and judicial handling affect the graduation rates for justice-involved students.

Detention and Graduating

Detention was evaluated using two measures, having any detention and the length of detention stays. Results of multiple logistical regression analyses on youth who experienced any detention, compared to those who had none, showed decreased graduation rates. In both models using the one key variable, participants with histories of detention were 57-70% less likely to graduate, depending on the incorporation of control variables. Adding more independent variables of contact continued to produce an adverse effect on graduation. Given that confinement has been shown to negatively impact youth development, these findings suggest that detention used as a means of punishment is also harmful to educational outcomes (McAra & McVie, 2007). For youth with extensive

contact histories, any encounters of detention are further harmful to potential school achievement. For youth experiencing contact for the first time, the prospect of graduating is damaged by detention.

Exposure to detention was strongly correlated with impediments to high school graduation. Length of detention contact was explored to evaluate how time spent detained affects its correlation to graduating. Minimal effects were found that link detention length to changes in graduation rates. The all-variable analysis, Table 6, showed no effects and the one key variable analysis only using length of detention showed less than a 1% decrease. Though there is a relationship between the experience of detention and later attempting to graduating, how long youth spend in detention is not statistically significant. The sensitivity of youth combined with the detriments of confinement yielded unanticipated results for tests on detention. Findings from detention analyses highlight how sentence types have more impact than sentence length when concerned about graduating.

Judicial Handling and Graduating

Judicial handling was also divided into experience with judicial and number of times a youth was judicially handled. All logistical regressions perform on youth having histories of judicial handling showed undesirable effects on graduating. After controlling for demographics and baseline delinquency, experiencing judicial handling lowered the likelihood of graduating by 43%. When combined with other measures of contact, graduating was further reduced to 51%. A decline in graduation rates with judicial handling suggests formal contact with the juvenile justice system is harmful to education and educational achievements. In line with prior research that finds system contact

unfavorable to the future success of youth, the current study supports limiting formal handling to increase youths' odds of graduating (Mulchy & Leone, 2012; Sweeten, 2006).

In contrast to having any judicial handling, the number of judicially handled cases per participant showed mixed results in respect to graduation. Both tests in Tables 5 and 6 including the number of judicially handled cases and controls (Model 2) showed positive influences on graduating. Conversely, the variable alone in Table 5 (Model 1) showed negative effects on graduation rates. The addition of controls, both in key variable analyses and amongst the other independent variables, modified the effects of increased judicial handling. In Model 2 of the all-included independent variable regression, for every judicially handled case, the prospect of graduating increased by 21%. The results suggest that more contact encourages youth to graduate when offenses are handled formally. Youth who come in contact with the juvenile justice system may receive more services under official supervision that strengthens their path to graduate. When monitored judicially, constructive mechanisms like meeting academic standards, associating with appropriate peers, or maintaining lawful behavior, are written as sentence conditions. Elements of judicial handling support a lifestyle complementary to academic success. These findings emphasize the need to further investigate exactly which features of judicial handling are protective and most effective in building strong relationship other mainstream institutions.

Contact, Graduating, and Controls

Controls were added to all regressions (Tables 2-6) conducted by the current study. The four control variables were useful in discerning how certain profiles of youth affect the influence of juvenile justice system contact on graduating. The effects of

detention and judicial handling were found to be implicated by certain demographics demonstrated by the statistical controls. Gender, race, socio-economic status, and a measure of delinquency were included to address individual characteristics among participants in the sample. Representing youth in the population, the four measures help describe which aspects of juveniles, and what backgrounds, require further investigation in addition to features of contact.

Contact and Graduating: Gender

Research on gender differences in the juvenile justice system overwhelming points to young males at a disadvantage for all circumstances of legal and educational involvement (Robertson & Walker, 2018). In addition to system misrepresentation, some studies only examine boys leading to gender inequalities within the field (Sweeten, 2006). Findings from the current study confirm gender discrepancies in all independent variables of contact. Being female was shown to have a positive effect on graduation while testing for the four features of detention and judicial handling. Despite the unfavorable consequences of contact, girls were still likely to graduate in every model including controls and among all the other factors. Though being female may be protective of graduating, it may also be a sign that contact interventions disproportionately harms males.

Contact and Graduating: Race

Race can be interpreted given the 3 categories recoded in the data methodology. Robertson & Walker, 2018 specifically identified problems with contact prevalence for Non-White youth. This study confirms that Non-White participants with more detention, any judicial handling, and more judicial handling had slightly less odds of graduating.

Minority youths' prospect of graduating, when controlling for gender, socio-economic status, and a measure of delinquency, still decreased by 2-5% in all models. One exception to this disadvantage was the evaluation of any detention which showed a 5% increase in graduation rates for Non-White youth. The Missing category does not reveal any information about the influence race except that having an unidentified race reduces the chance to graduate by 36-46% depending on the type of contact included.

Contact and Graduating: Socio-Economic Status

Household income is closely tied with juvenile justice system involvement and academic success (Mallett, 2017). Youth from low-income homes are inclined to experience difficulties with mainstream institutions (Robinson, 2017). The current study found that socio-economic status (SES) influenced how contact shapes graduation rates when youth are eligible for the free or reduced lunch program at school. This measure indicates whether a student is above or below the federal poverty line (FPL). All models including controls where SES was measured showed youth below the FPL were 45-46% less likely to graduate with all variables of detention and judicial handling. This finding substantiates Robertson & Walker's (2018) study on economic factors that connect child welfare and education to juvenile justice system involvement.

Contact and Graduating: Number of Juvenile Offenses

Assessment of the system influences as a mainstream institution requires a control that accounts for delinquency (Hjalmarsson, 2008). Adjusting for juvenile offenses widens the applicability of findings because the analyses will include on results on system contact, not individual behavior or the criminality of youth. The number of juvenile offenses showed that despite detention, judicial handing, and other control

variables, every additional committed offense, regardless of its handling type, dropped graduation rates by 19%. In key variable models (Tables 2 and 3), number of juvenile offenses were more harmful in length of detention stay reducing graduation rates by 46%. Having any detention ever, the number of offenses only decreased graduation prospects by 5%. Judicial handling varied slightly with every juvenile offense decreasing the likelihood of graduating by 6% with any judicial handling but 12% for every judicially handled offense.

Research Question Overview

The current study investigated how different types and lengths of juvenile justice system contact affect high school graduation rates in youth with histories of criminal involvement. Concepts of general strain theory guided the research question by emphasizing the role of tension formed from contact. Juveniles are highly susceptible to absorbing experiences in stressful contexts (Lee & Cohen, 2008). This thesis sought to explore the effects system contact that carry over into school settings because involvement shape a youth's ability to academically succeed. Limited information is available on the pathway between the juvenile justice system and graduation. The transference of strain produced by the legal system has yet to be explored in relation to outcomes of other mainstream institutions. Scholars have overlooked a systematic approach to address reduced high school graduation rates as a consequence of contact strain. The research question highlights strained experiences and the direction of system crossover for adolescent youth.

Researching the dynamic of mainstream institutions provides useful insight on the unique experiences of youth attempting to navigate them. Multiple institutions form a

complex path to graduation for system-involved youth. The full relationship between the juvenile justice system and schools is still being understood. In order to address the topic in question, how system contact affects high school graduation rates in youth, a quantitative analysis was performed using secondary data from Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012. The results help to answer how the juvenile justice system determines educational outcomes for youth.

Next Steps

Findings of this research pose further questions that expose new gaps about youth experiences in mainstream institutions. A negative correlation has been found certain types of system contact and failure to complete high school but how is that relationship further inflicted by sensitives to strain produced by involvement? This thesis addresses juveniles and adopts the mainstream assumption that graduating high school is a societal standard. Although the juvenile justice system restricts academic opportunities, educational settings may also prohibit the success of justice-involved youth. Schools determine if and how youth graduate. Examining the juvenile justice system as the only cause of adverse outcomes neglects to recognize the power that schools have in adjusting the academic experience for juveniles who experienced contact. As long as society continues to require high school completion for life attainment, youth will be expected to reach that goal regardless of involvement history. Schools influence the life of youth both before, during, and after contact. After contact, educational institutions can control the building and repairing of graduation pathways that follow juvenile justice system exposure.

When youth have system contact, it is imperative to understand how it limits opportunities at fundamental and systematic levels. To help juveniles with involvement reach conventional goals, there is great responsibility to handle youth properly. In addition to graduation protecting prospect and desistance, there are other areas that can build attainment. Since dropping out can impair the future outcomes, this study demonstrates that system contact can produce more graduations (Rahman Forhad, 2021). The disadvantage displayed by both system contact and adverse educational outcomes, however, can be indicative of a larger, systemic hardship. What youth experience during adolescence ultimately cumulates into the product of adult life. Creating successful outcomes, measured by graduation or otherwise, requires consistent effort, collaboration, and the removal of prohibitive structures that limit traditional goals. The relationship between mainstream institutions not only shapes the pathway to graduating high school but determines the chance to succeed far beyond it.

Policy Implications

Applying legal contact through the juvenile justice system is promising but currently problematic. Youth are shaped by mainstream institutions, some of which harm lifelong opportunities in others. The prospect of graduating can be sustained by addressing how courts handle minors. This research uses data from a state that employs handling minimums to certain groups of juveniles. Any experience of judicial handling is harmful. Despite lowering graduation rates, Connecticut law requires all felonies and serious offenses to be handled judicially. Youth who commit many extreme offenses and those that only commit one must both be handled judicially regardless of their academic prospects. Given that features of judicial handling can be encouraging of graduation in

some circumstances but detention did not, state law should consider relying on sentences that provide formal supervision but refrain from using detention. Additionally, according to CT juvenile handling guidelines, youth with previous judicial handling and those who have committed more than one offense must also be handled judicially regardless of severity of the new offense (Access to Information, 2013). This may endanger youth with prior contact who are attempting to live a lawful life in an institutionally prohibitive society, especially those from disadvantaged backgrounds. Since this research supports the need to only increase judicial handling for youth with higher offense rates, policies regarding when to judicially handle need to restrict detention methods for all youth in order to reduce the educational harm of judicial handling.

Future Research

The results of this research align with previous literature that confirms an unfavorable pipeline to graduation for juveniles with system contact (Hjalmarsson, 2008; Sweeten, 2006). Prior studies have utilized labeling theory and theories of propensity to explain the relationship between mainstream institutions, but a general strain theory (GST) test has yet to be tried (Bechtold Beardslee, 2014). Based on the research question and variables available through the data set, the current study was unable to measure the GST channels from system contact to educational outcomes. However, findings from this research advance the current body of knowledge on educational consequences of system contact and extend the support to preform additional theory applications.

Additionally, the limited amount of research, including the current study, only incorporates secondary education into analysis. Higher education, while potentially niche, may be another area to further predict future outcomes for juveniles in who successfully

complete high school or an equivalency. Long-term and life-long effects of juvenile justice system contact are often sampled through financial stability and employment projections as adults. Other outcomes such as intergenerational transmission of strain and physical health may be interesting areas to consider. This current study builds on the small frame of research that presently exists on high school attainment rates. The percentage of youth who do merge back on the standard pathway of graduation are of key interest as well and can help scholars recognize the circumstances that aid in conventional success.

The most urgent recommendation for research is to deeply investigate supports that assist juveniles in the realm of completing high school. The road to graduation for youth with system contact is broken. The field must delve into the effectiveness of current transitional programs, calculate the ratio of punishments sentenced compared to academic consequences that follow, and evaluate levels of success for evidence-based strategies that help youth recover from both lost learning time and strain acquired from system intervention. In light of the current study, further research is also needed to establish methods that identify and reduce distress produced by the juvenile justice system. If youth are expected to return to school, or are required to in order to be successful, then the system should foster positive experiences that transfer between mainstream institutions. Awareness on best practices, as well as futile and harmful ones, will inform policy decisions and directly impact youth, their future, and the potential of prosperous society.

Limitations

The current study possesses several limitations in need of discussion. In order to thoroughly address each identifiable limitation, this study was scrutinized with the intent to fully recognize all potential weaknesses in the research. The dataset, while complementary to the research question, stands as a drawback to the breadth of results. Within the limitation of data, there are disadvantages about availability worth noting. First, the data collected was not designed to specifically address the relationship of inquiry. Although variables were able to be selected, working with secondary data limits the information accessible and able to be incorporated into the current study. Although the research question was formulated from a general strain theoretical framework, the dataset was unable to measure individual youth experiences during involvement. Adjustments made through the recoding process created a suitable and reasonable set of variables to complete the thesis project. Ideally, this research can be replicated using alternative, qualitative or mixed method data to measure the development of strain from system contact.

Second, some data collection required interpreting to prepare the dataset for analyses. The study included measures of education and system contact however interpretation allowed for possibility of researcher bias. Compared to the definite choice in dependent variable, education exit type, the independent variables required operationalizing because multiple measures could encompass different aspects of involvement. Clarity in the codebook could offer more explanation to the types of contact and education resolutions measured in the dataset. For controls, other measures of

juvenile delinquency could also be considered, and a more comprehensive measure of race would increase study strength.

Lastly, the sample of Connecticut (CT) participants can only represent one faction of the country's entire youth population and cannot be generalized to describe all juveniles across the United States. Each juvenile justice system operates exclusive to a state government therefore experiences will vary across state lines. Since CT is geographically similar to its region New England, other Northeast states may exhibit similarities in system features. An isolated sample of one state, however, is not a perfect representation of all youth nationwide. The findings from the current study can only describe a juvenile pathway to graduation between one justice and one education system, both governed by the same state. System crossover involving other or multiple states may produce different findings.

In addition to data limitations, the lack of prior research limited the amount of information available to create both the literature review and study design. Studies included in the literature review are mainly relevant to either system contact or education. Only three studies were located that measure any features of the system and graduating high school, one of which only focuses on arrest. Though the current study is modeled after Sweeten (2006) and Hjalmarsson (2008) which use the same dataset, NLSY 1997, no recent studies have been published that directly examine how types of contact with the juvenile justice system affect modern high school outcomes. One dissertation from Bechtold Beardslee (2014) used the Crossroads study to look at contact and its effects on future outcomes, one of which is graduation. That work focused on the location of contact and the certainty of being caught for crime through mixed methods analyses.

Despite the small peak of relative research in the early 2000's, no identifiable studies have used or tested GST as a theoretical framework to study institutional crossover.

Absence of a previous theory test restricts the ability to replicate a study based on confirmed findings. The current study relied on related on Sweeten (2006) and Hjalmarsson (2008) to form an analytic strategy but utilized a new, more recent dataset with different measures. This research positively contributes to the field yet is not a comparable substitute for a formal theory test. Given the data collected to perform analyses of the research question, testing GST was unattainable. Though a theory test is eventually desired, the confines of a master's level thesis can only lay a foundation to further explore the topic.

Conclusion

This research included data from Trends in Juvenile Criminal Case Processing and Education, 2006-2012, Connecticut to measure effects of juvenile justice system involvement on the outcome of high school graduations. The results show that most contact is harmful to graduating. However, there some findings beneficial to graduation that are worth consideration. The knowledge gained by this research encourages others to investigate relationships between mainstream institutions and systematic crossover for youth. By focusing on the intersection of education and the juvenile justice system, reduced outcomes of graduating emphasize the distinct limitations that the juvenile justice system places on academic achievement and long-term success.

The amount of attention dedicated to helping youth in juvenile justice system is promising. Policy reform and program evaluations show desire to help vulnerable groups but research on solutions is not enough. Understanding how to prevent adverse life outcomes can also be achieved by studying the correlated forces that shape society. Though institutions are in place to help, intentions and outcomes are often misunderstood. Unfortunately, consequences of institutional failure are examined retrospectively and as a result, permanently hurt youth. Given the transmission of effects that crossover between the juvenile justice system and education, improvement to one will ultimately improve the prospect of youth in the other. Further, enhancing both has amplified and encouraging benefits to strengthen the pipeline to graduation.

References

- Abrams, L. S. (2006). From corrections to community: Youth offenders' perceptions of the challenges of transition. *Journal of Offender Rehabilitation, 44*(2/3), 41–53.
https://doi.org/10.1300/J076v44n02_02
- Abrams, L. S. (2013). Juvenile justice at a crossroads: Science, evidence, and twenty-first century reform. *Social Science Review, 84*(4), 725–752.
<https://doi.org/10.1086/674074>
- Access to Information in Juvenile Court Proceedings: Delinquency Proceedings*. State of Connecticut Judicial Branch. (2013). Retrieved May 8, 2022, from
https://www.jud.ct.gov/juv_infoguide/IJCP_Delinquency.html
- Agnew, R. (1985). A revised strain theory of delinquency. *Social Forces, 64*(1), 151–167.
- Agnew, R., & White, H. R. (1992). An empirical test of general strain theory. *Criminology, 30*(4), 475–499. <https://doi.org/10.1111/j.1745-9125.1992.tb01113.x>
- Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency, 38*(4), 319-361.
- Amin, V., Flores, C. A., Flores-Lagunes, A., & Parisian, D. J. (2016). The effect of degree attainment on arrests: Evidence from a randomized social experiment. *IZA Discussion Papers, No. 9695*, 475–499.
- Barron, J. E., Hyman, J. M., Vasquez, B. N. (2022). *Public school funding, school quality, and adult crime*. No. w29855. National Bureau of Economic Research

- Bechtold Beardslee, J. (2014). Under the radar or under arrest: How does contact with the juvenile justice system affect delinquency and academic outcomes? (dissertation). *U.S Department of Justice*. Retrieved from <https://www.ojp.gov/pdffiles1/nij/grants/248533.pdf>.
- Benda, B. B., Corwyn, R. F, Toombs, N. J. (2021). Recidivism among adolescent serious offenders: Prediction of entry into the correctional system for adults. *Crime Justice and Behavior, 28(5)*, 588–613.
- Black, M., Barnes, A., Strong, M., Brook, A., Ray, A., Holden, B., Foster, C., & Taylor-Robinson, D. (2021). Relationships between child development at school entry and adolescent health - A participatory systematic review. *International Journal of Environmental Research and Public Health, 18*, 1–36.
<https://doi.org/10.3390/ijerph 182111613>
- Bonnie, R. J., Scott, E. S. (2013). The teenage brain: Adolescent brain research and the law. *Current Directions in Psychological Science, 22(2)*, 156–161.
<https://doi.org/10.1177/0963721412471678>
- Bowers, L. (2000). Chapter 2: Deviance. In *Social Nature of Mental Illness* (pp. 7–28). Taylor & Francis Ltd / Books.
- Brewster, A. B., Wilson, W. A., & Strauman, T. J. (2019). Takin' it to the streets: Approach/avoidance motivation in the lives of at-risk youth. *Psychological Inquiry, 30(3)*, 147–150. <https://doi.org/10.1080/1047840X.2019.1646052>
- Cavendish, W. (2014). Academic attainment during commitment and postrelease education-related outcomes of juvenile justice-involved youth with and without

disabilities. *Journal of Emotional and Behavioral Disorders*, 22(1), 41–52.

<https://doi.org/10.1177/1063426612470516>

Closson, M., & Rogers, K. M. (2007). Educational needs of youth in the juvenile justice system. *The Mental Health Needs of Young Offenders: Forging Paths toward Reintegration and Rehabilitation*, 229–240.

Cundiff, P. R. (2017). Great expectations unmet: The impact of adolescent educational expectations on deviant coping during the transition to adulthood. *Sociological Inquiry*, 87(3), 449–471. <https://doi.org/10.1111/soin.12156>

Ford, J. A. & Schroeder, R. D. (2010). Higher education and criminal offending over the life course. *Sociological Spectrum*, 31(1), 32–58.

<https://doi.org/10.1080/02732173.2011.525695>

Franklin, R. (2022). Quantitative methods I. *Progress in Human Geography*, 46(2), 689–697. <https://doi.org/10.1177/03091325211063635>

Gallagher, A. (2014). More than a time out: Juvenile solitary confinement. *UC Davis Journal of Juvenile Law & Policy*, 18(2), 244–266.

Gase, L., Kuo, T., Lai, E., Stoll, M., Ponce, N. (2016). The impact of two Los Angeles County teen courts on youth recidivism: Comparing two informal probation programs. *Journal of Experimental Criminology*, 12(1), 105–126. <https://doi.org/10.1007/s11292-016-9255-1>

Geis, L. M. (2014) An IEP for the juvenile justice system: Incorporating special education law throughout the delinquency process. *University of Memphis Law Review*, 44(4), 869–920.

- Grigorenko, Elena L. Trends in Juvenile Criminal Case Processing and Education, Connecticut, 2006-2012. *Inter-university Consortium for Political and Social Research* [distributor], 2018-05-18. <https://doi.org/10.3886/ICPSR36141.v1>
- Gupta-Kagan, J. (2021). Beyond "children are different": The revolution in juvenile intake and sentencing. *Washington Law Review*, 96(2), 425–492.
- Hein, S., Baptiste, B., Square, A., Chapman, J., Geib, C., & Gringorenko, E. (2017). Violent offending among juveniles: A 7-year longitudinal study of recidivism, desistance, and associations with mental health. *Law and Human Behavior*, 41(3), 273–283. <https://doi.org/10.1037/lhb0000241>
- Hirsch, R. A., Dierkhising, C. B., & Herz, D. C. (2018). Educational risk, recidivism, and service access among youth involved in both the child welfare and juvenile justice systems. *Children and Youth Services Review*, 85, 72–80. <https://doi.org/10.1016/j.chilyouth.2017.12.001>
- Hjalmarsson, R. (2008). Criminal justice involvement and high school completion. *Urban Economics*, 613–630.
- Hünermund, P., & Louw, B. (2020). On the nuisance of control variables in regression analysis. *Urban Economics*, 613–630
- Johnson, M. E. (2018). The Effects of Traumatic Experiences on Academic Relationships and Expectations in Justice-Involved Children. *Psychology in the Schools*, 55, 240–249. <https://doi.org/10.1002/pits.22102>
- Kelly, J. P. (1997). Experiences in a juvenile justice system. *Social Education*, 65(5), 268–269.

- Klein, R. J., & Englund, M. M. (2021). Developmental pathways to adult happiness: Social competence and timely high school graduation. *Journal of Happiness Studies*, 22, 3023–3041. <https://doi.org/10.1007/s10902-021-00354-9>
- Lee, D. R., & Cohen, J. W. (2008). Examining strain in a school context. *Youth Violence and Juvenile Justice*, 6(2), 115–135. <https://doi.org/0.1177/1541204007308430>
- Leone, P. E., Lockwood, S., & Gagnon, J. C. (2017). Creating and sustaining safe environments in juvenile corrections. *The Wiley Handbook of Violence and Aggression*, 1–12. <https://doi.org/10.1002/9781119057574.whbva115>
- Loel, R. C., Waung, M., & Sheeran, M. (2015). Individual and familial variables for predicting successful completion of a juvenile justice diversion program. *Journal of Offender Rehabilitation*, 54(3), 212–237.
- Mallett, C. A. (2017). The school-to-prison pipeline: Disproportionate impact on vulnerable children and adolescents. *Education and Urban Society*, 49(3), 563–392. <https://doi.org/10.1177/0013124516644053>
- Maschi, T., Hatcher, S. S., Schwalbe, C. S., & Rosato, N. S. (2008). Mapping the social service pathways of youth to and through the juvenile justice system: A comprehensive review. *Children and Youth Services Review*, 30(12), 1378–1385.
- McAra, L., & McVie, S. (2007). Youth Justice?. *European Journal of Criminology*, 4(3), 315–345. <https://doi.org/10.1177/1477370807077186>
- McFarland, J., Cui, J., & Stark, P. (2018). *Trends in high school dropout and completion rates in the United States: 2014*. National Center for Education Statistics. <https://nces.ed.gov/pubs2018/2018117.pdf>
- Mendel, R. A. (2012). Juvenile confinement in context. *American Educator*, 36(2), 6–7.

- Monahan, K., Steinberg, L., & Piquero, A. R. (2018). Juvenile justice policy and practice: A developmental perspective. *Crime and Justice*, *44*(1), 577-619.
- Mulcahy, C. A., & Leone, P. E. (2012). Ensuring that They Learn. In E. L. Grigorenko (Ed.), *Handbook of Juvenile Forensic Psychology and Psychiatry* (pp. 541–551). essay, Springer Science + Business Media.
- Murnane, R. J., Willett, J. B., & Tyler, J. H. (2000). Who benefits from obtaining a GED? Evidence from high school and beyond, *The Review of Economics and Statistics*, *82*(1), 23-38. <https://doi.org/10.1162/003465300558605>
- Nath Baral, U. (2017). ‘Research data’ in social science methods. *Journal of Political Science*, *17*, 82–104. <https://doi.org/10.3126/jps.v17i0.20515>
- Natsuaki, M. N., Ge, X., & Wenk, E. (2006). Continuity and changes in developmental trajectories of criminal career: Examining the roles of timing of first arrest and high school graduation. *Journal of Youth & Adolescence*, *37*, 431–444. <https://doi.org/10.1007/s10964-006-9156-0>
- Puteh, F. & Hanafi, M. (2017). Quantitative data analysis: Choosing between SPSS, PLS and AMOS in social science research. *Journal of Youth & Adolescence*, *37*, 431–444. <https://doi.org/10.1007/s10964-006-9156-0>
- Qu, S. & Hahn, R. A. (2016). High school completion programs: A community guide systematic economic review. *Journal of Public Health Management and Practice*, *22*(3), E47–E56. <https://doi.org/10.1097/PHH.0000000000000286>
- Rahman Forhad, A. (2021). Minimum dropout age and juvenile crime in the USA. *Eastern Economic Journal*, *47*, 378–405. <https://doi.org/10.1057/s41302-020-00184-2fhsc>

- Rankin Mahoney, A. (1974). The effect of labeling upon youths in the juvenile justice system: A review of the evidence. *Law and Society Review*, 8(4), 583–614.
- Reed, N. W. (2014) *NDTAC Fact Sheet: Youth with Special Education Needs in Justice Settings*. Washington, DC: National Evaluation and Technical Assistance Center for Children and Youth Who are Neglected, Delinquent, or At-Risk (NDTAC).
- Robertson, A. A., & Walker, C. S. (2018). Predictors of justice system involvement: Maltreatment and education. *Child Abuse & Neglect*, 76, 408–415.
<https://doi.org/10.1016/j.chiabu.2017.12.002>
- Robinson, S., Jagers, J., Rhodes, J., Blackmon, B. J., & Church, W. (2017). Correlates of educational success: Predictors of school dropout and graduation for urban students in the Deep South. *Children and Youth Services Review*, 73, 37–46.
<https://doi.org/10.1016/j.chilyouth.2016.11.031>
- Schlesinger, T. (2018). Decriminalizing racialized youth through juvenile diversion. *Future of Children*, 28(1), 59–81.
- Schwalbe, C. S., & Maschi, T. (2009). Investigating probation strategies with juvenile offenders: The influence of officers' attitudes and youth characteristics. *Law and human behavior* 33(5), 357–367.
- Smith, D. J. (2005). The effectiveness of the juvenile justice system. *Criminal Justice*, 5(2), 181–195. <https://doi.org/10.1177/1466802505053497>
- Sørli, M., Amlund Hagen, K., & Berg Nordahl, K. (2021). Development of social skills during middle childhood: Growth trajectories and school-related predictors. *International Journal of School & Educational Psychology*, 9(1), 69–87.
<https://doi.org/10.1080/21683603.2020.1744492>

Steinberg, L. (2009). Adolescent development and juvenile justice. *Annual Review of Clinical Psychology*, 5, 451–485.

<https://doi.org/10.1146/annurev.clinpsy.032408.153603>

Steinberg, L. (2017). Adolescent brain science and juvenile justice policymaking. *Psychology, Public Policy, and the Law*, 23(4), 410–420.

<https://doi.org/10.1037/law0000128>

Sweeten, G. (2006). Who will graduate? Disruption of high school education by arrest and court involvement. *Justice Quarterly*, 23(4), 462–480.

<https://doi.org/10.1080/07418820600985313>

Swisher, R. R. & Dennison, C.R. (2016). Educational pathways and change in crime between adolescence and early adulthood. *Journal of Research in Crime and Delinquency*, 53(6), 840–871. <https://doi.org/10.1177/0022427816645380>

USDA Food and Nutrition Services, Eligibility Manual for School Meals: Determining and Verifying Eligibility 1–134 (2017).

Wald, J. & Losen, D. J. (2003). Defining and redirecting a school-to-prison pipeline. *New Directions for Youth Development* (99), 9–15.

Williamson, J. L., Bell, C. C., Dwyer, G., & Frierson, R. L. (2007). Toward a better juvenile justice system. *Adolescent Psychiatry*, 30, 47–53.

APPENDIX A

Institutional Review Board (IRB) Approval Letter

March 23, 2022

Dr. Feodor Gostjev
Associate Professor, Criminal Justice
Maxwell Library, Room 312C

Re: Approved IRB Application – Case #2022103

Dear Feodor,

The IRB application regarding proposal entitled, "*Investigating the effects of juvenile justice system contact on high school graduation rates*" is approved (exempt) by the Institutional Review Board (IRB).

The approval for your study is active for a period of one year from the date of this letter, expiring March 23, 2023. You are expected to adhere to the procedures as outlined in your proposal. Please share this letter of approval with your co-PI.

Thank you, Feodor. Good luck with your study.

Sincerely,

Frances Jeffries, Ph.D.
IRB Compliance Officer
Bridgewater State University
Bridgewater, Massachusetts 02325
Email: irb@bridgew.edu
Mobile/Text/WhatsApp: 508.241.6643