CHILDREN'S DELINQUENCY AFTER PATERNAL INCARCERATION

A Dissertation

by

CARLTON WILLIAM MATHIS

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Chair of Committee,	Holly Foster
Committee Members,	Jane Sell
	William McIntosh
	Oi-Man Kwok
Head of Department,	Jane Sell

August 2013

Major Subject: Sociology

Copyright 2013 Carlton William Mathis

ABSTRACT

This dissertation seeks to build on the growing research literature concerning the intergenerational consequences of paternal imprisonment for their children. The existing literature has explored the cumulative process of disadvantage that can result in negative outcomes for these children. However, there is little evidence of the mechanisms by which this occurs. This dissertation explores the possibility of the mediators outlined by Kaplan's (1986) self-referent theory and Giordano's (2010) symbolic interactionsist approach by which the intergenerational transmission of delinquency occurs using a unique dataset with information collected from multiple generations. This longitudinal dataset compiles information from 2,722 adolescents aged 11-18 that report their race, gender, level of self-esteem, parental relations, parental deviant behavior/characteristics, and peers and teacher stigmatization. The dataset also contains information on their fathers, 4,212 of the first generation participants, who report the frequency and causes of their own incarceration. Various models were estimated to test whether the association between paternal incarceration and delinquency was significant, the mediating effects of negative self-feelings, agency, identity, and emotion, and the moderating effect of both race and gender.

The results indicate that the association between paternal incarceration and delinquency is significant. The relationship is mediated by negative self-feelings, identity, and anger. Race did not moderate the relationship but gender did. These

findings were independent of a litany of individual, family, and structural factors. The implications and significance of these findings are discussed.

DEDICATION

This research is dedicated to the loving memory of Dr. Howard B. Kaplan.

ACKNOWLEDGEMENTS

The Department of Sociology at Texas A&M University has quite simply been my home for the last four years. The faculty are supportive, tough, brilliant, and an example of how collegiality and high standards combine to produce top-notch social science research and training of graduate students. Two years ago, Howard Kaplan presented me with an opportunity that would change my professional life forever. His offer for Tony Love and myself to work as assistants in the Deviance Lab have greatly impacted the scholar I have become. I learned plenty about research but I learned more about life and the things that are truly important when pursuing a career in academia. I spent many therapeutic hours on Howard's couch discussing theory, mapping out relationships on the white boards, and talking about family. I learned very quickly that Howard stopped everything he was doing to answer a call from his wife of adult children and that this was always standing policy in the lab. I'm eternally grateful that Howard not only taught me the habits of a productive scholar, but also those of a loving husband and father.

During my time in Aggieland I found a large group of supportive faculty and friends. Holly Foster has always been a source of inspiration; her support and encouragement are much appreciated. Her scholarship and teaching in the areas of life course criminology were instrumental in the development of this dissertation as well as to my general approach to sociology. She stepped up to chair my committee when Howard passed and helped me through that difficult transition.

Jane Sell has become a second mother for me and many other graduate students. Her comments on my work are blunt, insightful, tough, and absolutely correct. At the same time, I think I spent as much time talking to Jane about work-life-family balance as I did about my research. Her advice in both areas was always spot-on. Jane herself is strong, warm, and funny all at the same time. It has been a great comfort to receive weekly social support from our social psychology group meetings. I don't think I would've finished in a timely manner without them. There were many times that I worked harder to avoid a look of disappointment on Jane's face.

Alex McIntosh has been a wonderful committee member. His course in parameters of social research was ultimately the first introduction the methodology I ended up using for my dissertation. His patience and generosity with his time were invaluable to me, as I know they are to others. I can always depend on him to do things in a timely manner. I only wish I could have worked more closely with Alex in my time here.

I owe a great debt to Oi-Man Kwok as well. He has a gift for explaining complex methods and models so that everyone understands, regardless of their background, and he always keeps an eye towards the underlying "story" told by the models. While I don't know for how many students Oi-Man serves as a formal advisor, for many of us, he serves as an unofficial co-advisor when it comes to our dissertation work. In class and during dissertation discussions, Oi-Man has a gift for identifying the important stuff and doing away with the rest. I always leave his office feeling less nervous and more excited about my work.

As I sit and write this I realize that Tony Love has been as much of an unofficial committee member as he has been a colleague and a friend. We began working in the Deviance Lab together and spent the first several months "familiarizing ourselves" with Howard's data. That time would have been far more confusing and difficult without Tony. I will greatly miss our daily coffee discussions about a variety of topics from fantasy football, to real football, and eventually research. There are too many things to thank him for; too many times he pulled me through the depths, and too many professional highs in which he played a significant part. We wrote together, poured over SPSS output, and discussed all matters of criminology, sociology, and the academy. My first co-authored publication began during one of our morning coffee sessions. I will miss him terribly and hope we continue working together.

I cherish the friends I made in College Station. There are far too many to name individually, but collectively I have never had such a down-to-earth group of friends. Even though I am a native Texan, I was a bit skeptical about Aggies before I arrived here. Now, it's hard for me to believe that I'm already starting to miss this place and it definitely doesn't have anything to do with the geography. I will miss the loving, supportive friends I have made here. The greatest asset here is the people. The culture of support and fun among us was invaluable and I don't think any graduate student can be successful without it.

I am blessed with a loving and supportive family. They have supported me throughout my entire college career, which ended up being a much longer career than they expected, making all sorts of sacrifices on my behalf. They also at times have

pushed me to hurry it up. Both of my parents have asked me when my “real job” is going to start. My mother, Theresa Mathis, is one of the most intelligent people I have ever known. She has been my unofficial financial advisor throughout graduate school but also the number one fan of my research. She provides limitless emotional support. My father, Carl Mathis, gives me support, advice, humor, and pragmatism.

I gratefully acknowledge the generous support of Department of Sociology and the Kaplan family for awarding me a dissertation fellowship. Without this support none of this would have been possible.

TABLE OF CONTENTS

Page

ABSTRACT ii

DEDICATION iv

ACKNOWLEDGEMENTS v

TABLE OF CONTENTS ix

LIST OF FIGURES xi

LIST OF TABLES xii

CHAPTER I INTRODUCTION 1

CHAPTER II LITERATURE REVIEW 6

- Hypotheses 8
- Summary 15

CHAPTER III METHODS 17

- Sample 17
- Data Collection 19
- Measures 20
- Data Analysis 36

CHAPTER IV RESULTS 41

- Descriptive Findings 41
- Bivariate Analysis 46
- Baseline Model Findings 57
- Mediation Analysis Findings 64

CHAPTER V SUBGROUP ANALYSIS 71

- Moderation Analysis 72

CHAPTER VI DISCUSSION AND CONCLUSION 107

Summary of Results and Future Research Plans....107
Limitations....112
Conclusion and Policy Implications....113

REFERENCES....115

LIST OF FIGURES

Page

Figure 1. Conceptual Model 57

Figure 2. Baseline (Unmediated) Model 59

Figure 3. Kaplan Mediation Model 66

Figure 4. Giordano Mediation Model 68

Figure 5. Full Mediation Model 69

Figure 6. Boys Only 89

Figure 7. Girls Only 90

LIST OF TABLES

Page

Table 1. Distribution of Study Variables 37

Table 2. Descriptive Statistics by Child Gender 42

Table 3. Descriptive Statistics by Father's History of Incarceration 44

Table 4. Pearson Product Momentum Correlations between Study Variables 47

Table 5. Standardized Structural Coefficients on Delinquency 60

Table 6. Standardized Effects by Race 73

Table 7. Goodness of Fit Indices and Chi-Square Differences by Race 87

Table 8. Standardized Effects by Gender 91

Table 9. Goodness of Fit Indices and Chi-Square Differences by Gender 106

CHAPTER I

INTRODUCTION

The mass incarceration of adults in the United States of America is a well-documented phenomenon. Until 1972, the United States incarceration rate remained at relatively stable rate of 100 inmates per 100,000 residents. Since 1973, due to a change in sociodemographic characteristics of the population and attitudes towards sentencing practices the incarceration rate has increased exponentially (Garland 2001a). A less commonly acknowledged fact is that most of these incarcerated persons are also parents (Foster & Hagan 2009). In 1999 one and a half million children under the age of 18 had an incarcerated parent in the United States alone (Mumola 2000). Currently, 3% of the children in the United States have a parent incarcerated on any given day (Glaze and Maruschak 2008; Mumola 2000; Western and Wildeman 2009; Wildeman 2009). The Bureau of Justice Statistics estimated that 809,800 of the 1,518,535, or approximately 2.3%, of prisoners held in our nation's prisons at mid-year 2007 were the parents of children under the age of 18 (Glaze and Maruschak 2008). This report goes on to state that 744,200 of those incarcerated parents were fathers and that this number has increased by 77% since 1991 (Glaze and Maruschak 2008). The sheer number of children impacted by parental incarceration in this nation is unprecedented and researchers have taken notice. Much of the research concerning the collateral effect of paternal incarceration on their children concludes that these children are uniquely

harmed. In other words, these children are more likely to suffer negative consequences than comparable peers who do not experience parental incarceration.

This is evidenced by examples in the literature on the intergenerational consequences of parental imprisonment for their children (Hagan and Dinovitzer 1999; Travis and Waul 2003), the social exclusion of their children (Foster and Hagan 2007; Murray 2007), and the problem behaviors that children of incarcerated persons are significantly more likely to become involved in (Farrington et al. 2001; Pears and Capaldi 2001). While some evidence of intergenerational transmission from incarcerated parent to child exists (Wiesner and Capaldi 2003) it is far from conclusive. Thornberry et al. (2009) suggest that a full understanding of the manner in which parents and their offspring are behaviorally linked is far more complex than the simple notion that children will follow in their parents' footsteps.

Making sense of the association between parental incarceration and child well being has proven to me a much more challenging task for researchers. There is little debate over the presence of an association, however very important methodological and conceptual concerns have yet to be resolved. In a thorough summary of the empirical and conceptual progress being made in this area, Johnson and Easterling (2012) emphasize the persistent issue of selection bias. They claim that the inconsistency in research findings make it very difficult to determine whether the research findings indicate a real relationship between parental incarceration and child well-being or whether the findings are due to peculiarities of the samples. Additionally, we should exercise caution when interpreting such research findings because the relationships we

observe may exclude important variables from the analyses or aggregate children whose parental incarceration vary in terms of frequency, intensity, or duration (Johnson and Easterling 2012). Wildeman (2011) terms the issue of determining causal a relationship between parental incarceration and poor child outcomes the "elephant in the room" (Pp. 133). Causal inference, he explains, necessitates more information on factors shaping both the incarceration and the child outcomes. These suggestions would also improve the confidence in current research findings; however, they do not replace the need for experimental design, which is not possible or ethical in these circumstances, for the strongest tests of causality.

Perhaps a more pressing question is why the association between parental incarceration and children's delinquency is so persistent? Going even further, what drives the association? Recent findings indicate, unsurprisingly, that children of incarcerated fathers fair worse than children with non-incarcerated fathers (Wakefield 2007; Wakefield and Wildeman 2011). However, it would seem that the racial disparities we see in the prison population trickle down to the children of the incarcerated as well. Not only are Black children more likely to experience parental incarceration than comparable White children, but they also experience more severe negative effects on their well being (Wakefield 2007; Wakefield and Wildeman 2011). If evidence of these racial disparities in the deleterious effects of parental incarceration exists, further investigation is definitely warranted.

This dissertation seeks to contribute to the existing body of literature by investigating social psychological indicators of a child's well being as one of the

potential mechanisms through which having an incarcerated father affects a child's delinquent outcomes.

The massive increases in the United States incarcerated population since 1974 may exacerbate social inequality through the long-term consequences of the ex-con label. The extent to which parental incarceration exacerbates childhood inequality can only be measured once we determine if having an incarcerated parent does harm their children. However, the scholarly literature contains very few studies of the inter-generational transmission process (Giordano 2010). There have been numerous studies demonstrating that delinquent youth are more likely than other adolescents to report having a parent with a criminal history (Roettger et al. 2010) and several longitudinal studies have demonstrated a continuity effect between parent behaviors such as substance abuse, aggression, and delinquency in parents and similar behaviors in their children (van de Rakt et al. 2012).

Wildeman (2011) acknowledges that previous studies attempting to determine a causal link between parental incarceration and poor childhood outcomes often lack adequate control variables. One of Wildeman's (2011) major suggestions for improving causal arguments is to include factors that shape both the risk of parental incarceration and childhood outcomes. These factors include, but are not limited to, improved measures of parental criminal justice contact, drug use and abuse and social marginalization. Establishing a relationship net of these factors would be a major step in the direction of informing future longitudinal study designs. The data I will use allows

for me to investigate the association between paternal incarceration and child delinquency while controlling for most of these factors.

The dissertation proceeds as follows. Chapter 2 provides a review of relevant literature guided by two well established perspectives on the association between parental incarceration and child delinquency. The potential mediating and moderating pathways will also be explored. Chapter 3 discusses data, measures, and the analytic methods to be used in the analysis. Chapter 4 describes results from a quantitative analysis of the effects of father incarceration on children's self-reported delinquency mediated by the latent construct of Kaplan's negative self-feelings and scales of Giordano's Neo-Median constructs of agency, emotion and identity, using survey data from the Deviant Adaptations to Stress Study. Chapter 5 describes results from quantitative analysis of the moderating effects of gender and race. Finally, Chapter 6 concludes with a discussion of the results of the project and describes its implications for future research.

CHAPTER II

LITERATURE REVIEW

Two major perspectives in the body of literature guide this dissertation on the association between paternal incarceration and child's delinquency. The first major perspective attempts to determine if the evidence is compelling enough to support the claim that parental incarceration and child delinquency are strongly associated. The second major perspective implies, in light of the association between parental incarceration and child delinquency, that having an incarcerated father leads to detrimental outcomes for the child that they would otherwise not reasonably expect to be exposed to were they unaffected by parental incarceration.

Consistent with the first perspective is the ongoing debate as to whether the association between parental incarceration and child delinquency is a spurious one. The main issue is the methodological difficulty of disaggregating paternal criminality from parental incarceration. It is very common for fathers who experience incarceration to have a criminal past. They may have experienced multiple interactions with the criminal justice system, including arrests, charges, and convictions. It may also be the case that their children are exposed to this criminal past, despite the parent's best efforts to shield the child from such aspects of their lives. Other family members may directly model criminality or the family may engage in criminality cooperatively. This variation in exposure raises serious concerns as to whether the association we observe is due to paternal criminality or if the incarceration event has an effect above and beyond the

criminality (Farrington et al. 2001, Sampson and Laub 1993, Van de Rakt et al. 2008). Therefore, it is imperative for current studies to include adequate measures of adult criminality as a control variable.

According to the second perspective, not only is the association non-spurious, but parental incarceration *causes* detrimental outcomes for their children. Craigie (2011) demonstrates how paternal incarceration exacerbates externalizing problem behaviors in both male and female children, especially children of color. Although no single study reviewed provides overwhelming evidence of a true causal relationship, several studies go beyond simple association. They suggest that the association is robust and that identifying key indicator variables and addressing methodological limitations will allow a more compelling case for approaching causal explanation (Roettger et al. 2011, Roettger and Swisher 2011, Wildeman 2010, Wakefield and Wildeman 2011). In order to perform a true test of causality would involve randomly assigning parental incarceration which would be scientifically unethical and therefore impossible under these circumstances. The biggest hurdle has been the availability of a dataset containing the measures necessary to test the mechanisms theoretically hypothesized to link parental incarceration and child outcomes. This dissertation investigates the link between paternal incarceration and child delinquency with such a dataset that contains the measures necessary to test two such potential theoretical perspectives and their affiliated intervening factors.

Hypotheses

I followed the suggestions of Murray and Farrington (2008a) by reviewing empirical works that sought to establish evidence on the associations between parental incarceration and child outcomes. Rates of the outcome must be compared between the children of prisoners and a suitable control group in order to test for the association. Murray and Farrington (2008a) state three requirements to make such a comparison. First, it is necessary to have a control group; the study must include children of prisoners and children of non-prisoners. Second, the study needs to apply a consistent measure of child outcome; the same measure must be used for both the test and control groups. Third, they require the reporting of effect sizes or enough numerical information for the calculation of effect sizes.

Based on these criteria described by Murray and Farrington (2008a), several studies examine the association between parental imprisonment and child antisocial behavior. They placed these studies into three different groupings: general population studies, studies with matched control groups, and clinic and court-based studies. The first group drew samples from the general population of children. The second group used control groups who were at risk for reasons other than parental incarceration (i.e. children were separated from parents due to divorce). The third group used retrospective designs, recruiting children of prisoners and controls from clinics or courts.
Previous studies show that children of prisoners are at an increased risk for delinquent behavior throughout the life course (Huebner and Gustafson 2007; Murray and Farrington 2005). This increase of risk has been implicated in a variety of other negative

outcomes including health (Massoglia 2008), marriage rates (Western and Wildeman 2009), earnings (Western 2006), civic engagement (Manza and Uggen 2006), and education (Hagan and Foster 2012a; 2012b). So, not only is there an ever increasing great prevalence of children experiencing parental incarceration at some point during childhood, but there is evidence of consistent associations with negative child outcomes linked to having had an incarcerated father or mother (Western and Wildeman 2009, Foster and Hagan 2007; 2009, Hagan and Foster 2012a; 2012b). Research has also shown that children of fathers with many criminal convictions are at greater risk of developing persistent criminal behavior than children with noncriminal or marginally criminal fathers (van de Rakt et al. 2008).

Moving beyond association, it is important to establish how parental imprisonment influences these adverse outcomes. Strong association does not immediately imply causality. Rather than a cause, parental imprisonment might predict these outcomes because of an association with the disadvantaged populations these children also belong to (Murray and Farrington 2008a). This idea relates back to the selection perspective described above that Hagan and Dinovitzer (1999) referred to. Any future study that addresses this topic must make a clear distinction when making a causal argument.

Empirical studies considering the effects of parental imprisonment on children also examine whether the factors mediate or moderate the relationship. Mediators refer to "mechanisms through which parental incarceration might harm children" (Murray and Farrington 2008a:14). These variables account for the relationship between an

independent and a dependent variable (Baron and Kenny 1986). Moderators refer to factors that alter how parental imprisonment affects children (Baron and Kenny 1986; Murray 2007).

However, netting out these mechanisms through which parental incarceration might influence children has proven to be a difficult task and there has been debate over to what extent the incarceration of parents can be said to cause poor outcomes for their children (Murray and Farrington 2008a, Wakefield and Uggen 2010, Wildeman and Western 2010, Wakefield and Wildeman 2011). Although these obstacles to determining causality still exist, researchers have made important contributions to the body of work in identifying how having an incarcerated parent influence a variety of child outcomes. Findings suggest that not only do incarcerated parents exacerbate preexisting problem behaviors for children, but the risk of having an incarcerated parent seems to be moderated by race (Wildeman 2009).

Most of the theoretical perspectives reviewed above would be considered mediating the relationship between parental imprisonment and children's outcomes. Murray and Farrington (2008a) suggest several other mediating factors, although they clearly state that the empirical evidence is limited. However, there is evidence linking paternal imprisonment to the development of criminal behavior children in the Netherlands (van de Rakt et al 2012).

Identifying moderating variables can help explain why some children have adverse outcomes after parental imprisonment while other children do not (Murray and Farrington 2008a). There seems to be disagreement in the existing body of literature

pertaining to which parent's incarceration is most damaging to children. Some research has suggested that maternal imprisonment is more damaging for children than paternal imprisonment (Hagan and Dinovitzer 1999) while other findings suggest that paternal incarceration is associated with aggression in boys but not girls (Wildeman 2010). Future study is necessary to address this issue. There are several reasons why this might be the case. First, children are more likely to live under the mother's care prior to incarceration (Mumola 2000), and this prior care arrangement might lead to a stronger bond between mother and child than father and child. Second, when mothers are imprisoned, children are more likely placed in foster care than placed with the other parent (Mumola 2000). Third, there are fewer women's facilities across the country, increasing the likelihood that mothers are held further away from home and making visitation more difficult (Mumola 2000). However, maternal imprisonment is usually shorter than paternal which may help with coping for their children (Murray and Farrington 2008a). Murray and Farrington (2008a) were unable to find any studies that tested the hypothesis that maternal imprisonment is more harmful than paternal imprisonment. Emerging research provides evidence that not only does gender of the parent have a differential effect on children, but the maternal incarceration effect spills over to children with non-incarcerated mothers in schools (Hagan and Foster 2012a).

Other moderating variables considered include demographic variables and various social factors of the child, family, and wider society. The results are inconclusive as to whether child sex, child social class, and child race play a moderating role and have received differing amounts of attention in the literature. Murray and Farrington (2008a)

also suggest possible moderators that have yet to be tested empirically. No studies have tested interactions between parental incarceration and potential resilience factors in predicting child outcomes. Parent-child relationships and parenting practices prior to imprisonment may influence how children react to the event. These effects could also vary by type of crime, neighborhood context, and cross-national region (Murray and Farrington 2008a). There is much to be learned about the moderating effects of parental imprisonment on children. Future studies need to investigate these possible interactions with appropriate samples and statistical tests.

Giordano and colleagues (2010) conducted a long-term follow up of women incarcerated for delinquency. When the women began having children of their own, qualitative interviews were conducted with both the mothers and their adolescent children. These data provided a unique opportunity to investigate the process of how delinquency is transmitted from parent to child.

Giordano develops a theory intergenerational transmission in the social learning tradition. This approach extends the social learning tradition put forth by Sutherland (1947) and others. While the focus of social learning theory is on the communicative exchange of definitions favorable to deviance and delinquency, this theory goes beyond the *direct transmission* of learned behavior (Giordano 2010). Although direct transmission may occur on occasion, Giordano (2010) applies a grounded theory approach to the qualitative interviews between mothers and their children. What emerged from this approach is a revised theoretical framework within the social learning tradition. In what Giordano (2010) terms a neo-Median approach to understanding the

transmission process, parents have more opportunities to *indirectly* influence the definitions their children subscribe to in a variety of ways. From the perspective of the child, three potential mechanisms are proposed – *agency, identity,* and *emotion*.

Taken together, this revision of traditional social learning theory in the symbolic interactionism perspective places the children as active participants in the social exchange that occurs during the learning process (Giordano 2010). In respect to agency, Giordano (2010) acknowledges that children are more than a collection of definitions passed down from parent to child. However, the idea is that if parents are more closely aligned with deviant status, the child is less likely to have less agency, or fewer prosocial definitions to call upon. As for identity, Giordano emphasizes that children are never exact replicas of their parents. However, children of the incarcerated do have to contend with the "legacy" of their parents (Giordano 2010). Others interpret their actions within the context of being similar to that of a deviant parent. That idea of a "reflected appraisal" occurs by others as well as within the child themselves (Matsueda 1992). Therefore, while developing their identities, these children are in a constant state of self-evaluation of behaviors both similar and dissimilar to those of their parents. Finally, Giordano explains how within the symbolic interactionist perspective emotions are both developed and managed within a social context.

In this dissertation, the concept of anger and the possible association between anger and delinquency is explored. Anger is a central component to Agnew's general strain theory, a foundational explanation for crime and deviance. Strain results from a social context in which individuals cannot achieve monetary success through

conventional means (Merton 1938). General strain theory posits that anger is the factor that links strain and deviant behavior. The strain individuals experience results in an emotional response, such as anger. This response, in turn, leads to deviant modes of adaptation, such as deviant or criminal behavior (Agnew 1992).

This is an important step in our understanding of the transmission process because Giordano's research has demonstrated that the social learning process is complex. By incorporating symbolic interactionism we can gain a greater understanding of the transmission process from the perspective of the child. That distinction will be of the utmost importance for multiple children in the same household. Placing the symbolic meaning at the forefront may provide insight into the range of perspectives children possess in respect to having an incarcerated parent.

A vital component of the proposed study involves taking into consideration Kaplan's (1986) theory of self-referent behavior. The most important feature of this general theory of deviant behavior relates to the causal implications of negative attitudes for the subsequent adoption of deviant patterns. So, more broadly, this theory explains what motivates one to engage in deviance over conformity. The theoretical model is based on the idea that self-esteem motivates persons, universally and characteristically, to behave in ways that maximize the experience of positive self-attitudes, and to minimize the experience negative self-attitudes (Kaplan 2009). Self attitudes refer to the person's more or less intense positive and negative emotional experiences on perceiving and evaluating his or her own attributes and behavior (Kaplan and Lin 2005). According to the general theory (Kaplan 1986) intense self-rejecting attitudes are the end result of a

history of membership group experiences in which the person was unable to defend against, adapt to, or cope with, circumstances having self-devaluing implications. These experiences include perceptions of devalued attributes and behaviors and perceived negative evaluations by valued others. Because self-devaluing experiences in membership groups affect the development of intrinsically distressful negative self-attitudes, the individual is hypothesized to come to associate in his or her own mind those experiences with the development of derogatory self-attitudes (Kaplan and Lin 2005). Using data from the first generation of the Adaptations to Stress Study, early life incarceration was found to result in employment problems and reduced income which in turn induces negative self-feelings (Kaplan and Stiles 2008).

Summary

This study attempts to fill a gap in the literature by empirically testing theoretical mechanisms outlined in the above literature. As stated previously, incarceration data from the Adaptations to Stress Study has an established precedent in the existing body of literature. I expect that the results of this dissertation will inform a conservative estimate of intergenerational transmission considering the small number of ever-incarcerated parents. Most importantly, empirical evidence of potential mechanisms and the moderating role of gender will help to inform intervention efforts in the future.

This chapter has reviewed research and theoretical perspectives on the ways in which parental incarceration may influence the delinquent outcomes of children. In particular, it has argued that research on crime has historically focused on the individual

and neighborhoods and that the addition of parental incarceration is important for researchers studying the crime. In the next chapter, I describe the analytical methods used in the dissertation to address these hypotheses.

H1: Experiencing paternal incarceration is positively associated with increased delinquency in adolescence, net of other risk factors.

H2: Experiencing paternal incarceration is positively associated with negative self-feelings, which increases delinquency in adolescence, net of other risk factors.

H3: Experiencing paternal incarceration is negatively associated with agency, which increases delinquency in adolescence, net of other risk factors.

H4: Experiencing paternal incarceration is negatively associated with identity, which increases delinquency in adolescence, net of other risk factors.

H5: Experiencing paternal incarceration is positively associated with happiness, which decreases delinquency in adolescence, net of other risk factors.

H6: Experiencing paternal incarceration is positively associated with anger, which increases delinquency in adolescence, net of other risk factors.

H7: The association of paternal incarceration with delinquency varies by race.

H8: The association of paternal incarceration with delinquency varies by gender.

CHAPTER III

METHODS

This chapter has three main objectives; first, to describe the characteristics and composition of the sample used in this study. Second, to describe the measures used to operationalize paternal incarceration, juvenile delinquency, negative self feelings, agency, identity, emotion, and the control variables that were part of the proposed models described in the previous chapter; and third, to present the rationale behind the choice of analytic techniques used to address the main research questions of this study.

Sample

The sample consisted of multigenerational panel study data that was specifically designed to (1) determine the effects of stress on people's lives, (2) explore the mechanisms people use to cope with stressful events, and (3) understand why some people commit crimes, use drugs, or dropout of school.

The original respondents for this study were surveyed in 1971. Participants were seventh grade students who junior high school in the Houston Independent School District. Of the 36 schools in the district a random sample of 18 schools were selected to participate in the study (Kaplan, Liu and Kaplan 2005; Kaplan 1980; Kaplan and Lin 2005; Pals and Kaplan 2013). This group of respondents was re-interviewed up to six times in 1972, 1973, 1982-1989, 1988-1990, and 1994-1998. Once these original respondents reached adulthood (ages 35-39), they were asked about the number, ages,

sex, and addresses of their biological, step, adopted, and foster children. Their permission was then obtained to interview their children who were subsequently contacted to participate in a second-generation study (G2). These second generation participants were first interviewed between 1994 and 2002 (Time 1). They were re-interviewed up to two times during the periods between 1997-1999 (Time 2) and 2003-2008 (Time 3). A total of 7,519 second-generation participants had been interviewed. Although it was initially planned to re-interview all participants, due to funding limitations only 2,224 subjects were re-interviewed three years later (Time 2).

Both the first-generation and second-generation panels have been the source of data for several studies addressing the association between self-derogation and deviant behavior and the variables that mediate and moderate this relationship (see for example, Halim 2005; Kaplan and Johnson 2001; Kaplan and Lin 2000, 2005; Kaplan and Tolle Jr. 2006).

For the present purposes, I relied on both data from both first-generation participants (G1) at Time 7 and second-generation participants (G2) at Time 1. I specifically looked at those individuals from the first generations that had: (1) children in the (G2) sample and (2) ever been incarcerated during any point in their adult lives. There are 4212 fathers of (G2) children in the G1-T7 wave. Of those 4212 fathers, 784 (19 percent) report having ever been incarcerated, closely approximating the prevalence of paternal incarceration found in similar studies (Hagan and Foster 2012a; Western and Wildeman 2009; Wildeman 2009).

Of the 2722 children with fathers in the (G1) Time 7 wave, 471 (17 percent) have fathers who were ever incarcerated. In order to investigate the potential moderating effect of gender I will run separate models for boys and girls. There are 1414 boys and 1308 girls. To investigate the moderating effect of race I will run separate models for White, Black, and Hispanic children. Due to the low prevalence, all other races/ethnicities will be excluded from the analyses. There are 1558 White children, 825 Black children, 339 Hispanic children.

Data Collection

Face-to-face interviewing, conducted at the respondent's home or some other convenient location, was used to obtain information from both first-generation and second-generation participants. In general, the interview lasted about two hours and included a variety of topics such as school (when age appropriate), family relationships, drug and alcohol consumption, and personal relationships.

A structured questionnaire was used to collect the data contained around 170 items. Some parts of it, such as those inquiring about personal feelings, and coping mechanisms, were self-administered, unless the participant decided otherwise. Other questions aimed to gather personal data (i.e. age, educational level, among others), and information related to deviant behavior/characteristics (both personal and parental), were directly elicited by the interviewer. In several instances, participants were given a card containing a list of all possible choices and were asked to respond with only the number/letter of the choice that described their own behavior or traits and/or the

behavior or traits of their parents. The same questionnaire was used to collect the data for both waves. All participants were assured confidentiality and informed of their right to not answer a question or questions without prejudice. Participants received remuneration of $25, regardless of their willingness to complete all questions.

Measures

Dependent Variable

This measure was modeled after the delinquency scale constructed by Liu and Kaplan (1999). The dependent variable of this study was juvenile delinquency (mean age = 13.29). This variable was modeled as a scale composed of responses to the following question: "When you were doing this, what was the most that you ever did it?" Response choices were reversed coded so that higher numbers indicate higher frequency (1=Only once or sporadically, 2=A few times a year or less often, 3=A few times a month, 4=About once a week, and 5=About everyday). In order to make the scales comparable, the variable was scaled to range from 0 to 1. The scale consisted of sixteen both violent and non-violent items ($\alpha = .88$) as follows: (1) Took things worth between $2 and $50 that didn't belong to you? (2) Took little things worth less than $2 that didn't belong to you? (3) Sold marijuana, grass or hashish? (4) Sold narcotics, drugs, dope, or heroin? (5) Started a fistfight? (6) Took part in gang fights? (7) Used force to get money or valuables from another person? (8) Broke into and entered a home, store, or building? (9) Purposely damaged or destroyed public or private property that didn't belong to you? (10) Took things from someone else's desk or locker at school without permission? (11)

Took a car for a ride without the owner's knowledge? (12) Beat up on someone who had done not done anything to you? (13) Took things worth $50 or more that didn't belong to you? (14) Used alcohol on other than religious occasions? (15) Smoked marijuana? (16) Used other illegal drugs? The range was from 0 to 0.70 with a mean of 0.04 and a standard deviation of 0.08.

Independent Variable

Independent variables are the presumed influences on a dependent variable. The independent variable of this study was paternal incarceration. This variable was measured during generation 1 Time 7 (G1T7). Biological fathers indicated how old they were the last time they "were sentenced to prison, jail, or juvenile detention." Using responses this question and the child's age I was able to employ the Century Month Code to determine temporal order of the last paternal incarceration event. A Century Month Code (CMC) is the number of the months since the start of the century. The CMC for a date is calculated from the month and year as follows:

CMC = (YY * 12) + MM for month MM in year 19YY.

To calculate the month and year from the CMC I used the following formulae:

YY = int((CMC - 1) / 12)

MM = CMC - (YY * 12)

Based on this code I created four mutually exclusive categories for paternal incarceration: (1) Biological father's last incarceration occurred prior to birth, (2) Biological father's last incarceration occurred after birth but before age twelve, (3) Biological father's last incarceration occurred after age 12, and (4) a reference category of respondents whose fathers were never incarcerated.

Mediator Variables

Mediator refers to the mechanisms through which paternal incarceration might affect children's delinquency. A variable that functions as a mediator should (1) demonstrate covariance between the presumed mediator and independent variable, (2) account for variation in the dependent variable, and (3) "when the indirect paths through the mediating variable are controlled, a previously significant relations between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when the direct path between the independent and dependent variables is zero" (Baron and Kenny 1986:1176). Mediators should be investigated by testing whether, when the mediator in question is controlled for, the association between paternal incarceration and the child's delinquency is reduced (Baron and Kenny 1986). This study examined the mediating roles of child's negative self-feelings, agency, identity, and two emotional constructs (happiness and anger).

Negative Self-Feelings

This was a latent variable operationalized by three observed scales: anxiety, depressive affect, and self-derogation (Kaplan, Martin, and Johnson 1986). Each score was a separate sum of a set of dichotomous indicator variables (1=True, 0=False) divided by the number of indicators in the scale in order to obtain a single score ranging from 0 to 1. Anxiety was reflected in positive responses to being bothered by bad dreams, sweaty hands, headaches, mind wandering, being often angry, having difficulties in keeping his or her mind on things, sitting still, and sleeping. Depression was reflected in three items: not feeling in good spirits, not being a happy person, and not getting fun out of life (Pals and Kaplan 2013). Self-derogation was reflected in positive responses to three items, some of which were originally used by Rosenberg (1989) in his self-esteem scale: feeling useless, feeling no good, and not having respect for oneself.

Agency

This measure was developed to reflect the qualitative theme developed by Giordano (2010). This variable was composed of ten self-reported, dichotomous (1=True, 0=False) indicator variables. I divided each score by the total number of indicators in order to obtain scores ranging from 0 to 1, with a mean of 0.81, a standard deviation of 0.19, and a Kuder-Richardson coefficient of reliability of 0.65. The scale was coded so that higher numbers indicate higher levels of agency. An asterisk (*) indicates an item that was reverse-coded. The items were as follows: (1) My parents

hardly ever trust me to do something on my own*. (2) My family tries to run my life*. (3) My family can't give me the chance to succeed that most kids have*. (4). I doubt if I will get ahead in life as far as I would really like*. (5) There isn't much chance that a kid from my neighborhood will ever get ahead* (6) I would do a lot better in life if the society didn't have the cards stacked against me*. (7) When I do something wrong, it's almost like it's someone else doing it, not me*. (8) It's mostly luck if one succeeds or fails*. (9) You can do very little to change your life*. (10) Often I feel that I don't have enough control over the direction my life is taking*.

Identity

This measure was developed to reflect the qualitative theme developed by Giordano (2010). This variable was composed of twelve self-reported, dichotomous (1=True, 0=False) indicator variables. I divided each score by the total number of indicators in order to obtain scores ranging from 0 to 1, with a mean of 0.76, a standard deviation of 0.17, and a Kuder-Richardson coefficient of reliability of 0.63. The scale was coded so that higher numbers indicate higher levels of identity. An asterisk (*) indicates an item that was reverse-coded. The items were as follows: (1) I openly show affection to my parents. (2) My parents always expect a lot of me. (3) My parents try to understand my point of view. (4) I find it easy to discuss problems with my parents. (5) As long as I can remember, my parents have put me down*. (6) I have never been able to accomplish as much as my family wanted me to*. (7) My parents do not like me very much*. (8) It is very important to me what my parents think of me. (9) I want to be like

my parents when I am an adult. (10) My parents and I often talk about my future educational and job plans. (11) My experiences outside my house make me wonder whether my parents' ideas are right or not*. (12) My family and I have the same views on what is right and wrong.

Happiness

This variable was composed of three self-reported, dichotomous (1=True, 0=False) indicator variables. I divided each score by the total number of indicators in order to obtain scores ranging from 0 to 1, with a mean of 0.56, a standard deviation of 0.39, and a Kuder-Richardson coefficient of reliability of 0.72. The scale was coded so that higher numbers indicate higher levels of happiness. The items were as follows: (1) My life is a lot more satisfying now than it used to be. (2) I like myself a lot better now than I used to. (3) I am a better person now than I used to be.

Anger

This measure was developed to reflect the anger identity measure constructed by Giordano and colleagues as closely as possible (Giordano, Schroeder and Cernkovich 2007). This variable was composed of nine self-reported, dichotomous (1=True, 0=False) indicator variables. I divided each score by the total number of indicators in order to obtain scores ranging from 0 to 1, with a mean of 0.25, a standard deviation of 0.21, and a Kuder-Richardson coefficient of reliability of 0.68. The scale was coded so that higher numbers indicate higher levels of anger. The items were as follows: (1) If

someone insulted me, I would probably hit him. (2) If someone insulted me, I would probably insult him back. (3) If someone insulted me, I would probably feel very angry but not do anything about it. (4) All in all, I'm inclined to feel that I am a failure. (5) I feel I do not have much to be proud of. (6) I don't like myself as much as I used to. (7) I used to be a better person than I am now. (8) I worry a lot more now than I used to. (9) I often feel downcast and dejected.

Moderator Variables

Moderators refer to factors that alter how paternal incarceration affects children (Baron and Kenny 1986; Murray 2007). According to Baron and Kenny (1986:1174), moderators are variables that affect the direction and/or strength of the relationship between an independent variable and a dependent variable. Moderators should be identified by testing for statistical interactions between paternal incarceration and potential moderators in predicting child outcomes (Baron and Kenny 1986). This study examined the moderating role of child's gender and race (described below).

Control Variables

A control variable can be defined as a factor, affecting the relationship between an independent and a dependent variable, which is kept constant as to minimize its effects on the outcome. In this study five control variables were analyzed at the father level: race, prior deviance, drug use, educational attainment, and family income. Sixteen additional individual and family control variables were analyzed at the child level: age,

race, sex, school performance, school attachment, religious attendance, history of sexual abuse, low self-control, time spent with friends, mother's binge drinking, contact with father, father's involvement, living with both parents, parent closeness, parent supervision and socioeconomic status.

Father's Race

Race was a nominal variable with the categories (1) White, (2) Black, (4) Hispanic, (5) Asian, and (6) Native Americans. Respondents were asked the following question: "Which one of the following groups do you belong to?" For the purposes of this study, three mutually exclusive categories were created for White, Black, and Hispanic fathers. All others were excluded from the analyses.

Prior Deviance

This measure of deviance is modeled on the scale of general deviance used by Kaplan and Lin (2005). This variable was modeled as a scale composed of responses to the following question: "When you were doing this, what was the most that you ever did it?" Response choices were reversed coded so that higher numbers indicate higher frequency (1=Only once or sporadically, 2=A few times a year or less often, 3=A few times a month, 4=About once a week, and 5=About everyday). In order to make the scales comparable, the variable was scaled to range from 0 to 1. The scale consisted of twelve both violent and non-violent items ($\alpha = .73$) as follows: (1) Took things worth between $2 and $50 that didn't belong to you? (2) Took little things worth less than $2

that didn't belong to you? (3) Carried a razor, switchblade or gun? (4) Sold illegal drugs? (5) Started a fistfight? (6) Took part in gang fights? (7) Used force to get money or valuables from another person? (8) Broke into and entered a home, store, or building? (9) Purposely damaged or destroyed public or private property that didn't belong to you? (10) Took a car for a ride without the owner's knowledge? (11) Beat up on someone who had done not done anything to you? (12) Took things worth $50 or more that didn't belong to you? The range is from 0 to 0.77, with a mean of 0.10 and a standard deviation of 0.10.

Drug Use

This measure of drug use is modeled after the scale of drug use constructed by Kaplan, Tolle, and Yoshida (2001). This variable was modeled as a scale composed of responses to the following question: "When you were using this, what was the most that you ever used it?" Response choices were reversed coded so that higher numbers indicate higher frequency (1=Only once or sporadically, 2=A few times a year or less often, 3=A few times a month, 4=About once a week, and 5=About everyday). In order to make the scales comparable, the variable was scaled to range from 0 to 1. The scale consisted of nineteen substances ($\alpha = .86$) as follows: (1) tobacco (2) beer, (3) wine, (4) hard liquor, (5) steroids without a prescription, (6) inhalants, (7) stimulants without a prescription, (8) sedatives or barbiturates without a prescription, (9) tranquilizers without a prescription, (10) non-prescription drugs to get high, (11) marijuana or hashish, (12) psychedelics or hallucinogens, (13) powdered coke or cocaine, (14) alcahist or albatrixt,

(15) crack cocaine, (16) heroin, (17) opiates or pain killers without a prescription, (18) PCP, phencyclidine, angel dust, (18) designer drugs. The range is from 0 to 0.76, with a mean of 0.17 and a standard deviation of 0.12.

Educational Attainment

This variable was measured as how many years of formal schooling the respondent completed: (1) some junior high, (2) graduated junior high, (3) some high school, (4) some vocational or technical school, (5) completed GED, (6) graduated high school, (7) graduated vocational or technical school, (8) some college, (9) graduated college, (10) some post-graduate education, (11) a post-graduate degree. The range is from 1 to 11, with a mean of 6.92 and a standard deviation of 2.31.

Family Income

Family income was a categorical variable measured as the value that best represents the respondent's total household income in the last twelve months before taxes for everyone in the household. The respondents selected a numerical code ranging from 1 to 14 with that corresponded to their household income. I converted these values so that number on the scale represented the median value in dollars: (1) $1500, (2) $3500, (3) $4500, (4) $5500, (5) $6500, (6) $7500, (7) $8500, (8) $12000, (9) $17500, (10) $22500, (11) $29500, (12) $42500, (13) $62500, (14) $7500, (15) $1500. The range is from $1500 to $75000, with a mean of 48632.64 and a standard deviation of 21501.27.

Child's Age

Age was a continuous variable measured as years of age at the time the respondent was first interviewed. The range is from 11 to 18, with a mean of 13.29 and a standard deviation of 1.89. Older people tend to be associated with higher self-derogation and depression. Specifically, research has indicated that self-esteem levels are high in childhood, tend to drop during adolescence, rise gradually throughout adulthood and decline sharply in old age (Robins et al. 2002).

Child's Race

Race was a nominal variable with the categories (1) White, (2) Black, (4) Hispanic, (5) Asian, and (6) Native Americans. Respondents were asked the following question: "Which one of the following groups do you belong to?" For the purposes of this study, three mutually exclusive categories were created for White, Black, and Hispanic adolescents. All others were excluded from the analyses. White adolescents have been found to have higher rates of self-derogation (Gray-Little and Hafdahl 2000; Twenge and Crocker 2002) and depression (Riolo et al. 2005). Also, research has shown that being labeled as "deviant", tends to a greater effect on the self-concept of males and whites, specifically because both groups tend to be less involved in delinquent activity (Bartusch and Matsueda 1996; Kaplan 2000; Koita and Tripplet 1998).

Child's Gender

Gender was a dichotomous variable measured and coded by the interviewer; the categories were as follows 1=respondent is a male, and 0=respondent is a female. The study sample was equally distributed, 52 percent of the respondents were males, and 48 percent were females. According to previous research, female gender tends to be associated with higher levels of both self-derogation (Polce-Lynch et al. 2001) and depression (Murakumi 2002). However, with regard to self-derogation, it should be noted that some studies have found that the impact of gender differs across racial groups, with Black, Native American and Asian women having lower levels of self-derogation than their male counterparts (Martinez and Dukes 1991). Although studies addressing the effects of gender in the self-esteem and levels of depression of individuals bearing stigmatizing illnesses are inconclusive at best, controlling its effect allowed supporting previous research in this area.

School Performance

This variable was composed of an additive scale of responses to the following questions: "On average, what were your grades in math, science, reading or English, and in school overall?" The responses were coded so that higher numbers indicated higher grades: (1) mostly F's, (2) D's and F's, (3) Mostly D's, (4) C's and D's, (5) Mostly C's, (6) B's and C's, (7) Mostly B's, (8) A's and C's, (9) A's and B's, (10) Mostly A's. The variable was scaled to range from 0 to 1. The range is from 0.13 to 1, with a mean of 0.78 and a standard deviation of 0.16.

School Attachment

This variable was composed of seven dichotomous (1=True, 0=False) indicator variables. The questions are as follows: (1) It is very important to me what my teachers think of me, (2) I have been happy in school, (3) I think it is important to get good grades. (4) I do get along with the kids at school, (5) Most of the kids at school like me very much, (6) I feel welcome in school clubs/extracurricular activities, and (7) I belong to school clubs, teams, or activities either in or outside of school. The range is from 1 to 7, with a mean of 6.07 and a standard deviation of 1.10.

Religious Attendance

This variable was composed of a single indicator response to the following question: "At present, about how often do you attend religious services?" Responses were reverse coded so that higher numbers indicate greater frequency: (1) Hardly ever or never, (2) A few times a year, as on important holidays or special occasions, (3) About once a month, (4) About two or three times a month, and (5) About once a week or more. The range is from 1 to 5, with a mean of 3.83 and a standard deviation of 1.43.

History of Sexual Abuse

This variable was composed of a single indicator response to whether the respondent was ever forced, in any way, to have a sexual experience they did not want with a relative. This was a dichotomous variable (1=Yes, 0=No). The range is from 0 to 1, with a mean of 0.01 and a standard deviation of 0.09.

Low Self-Control

This measure was constructed based on the self-control measure developed by Gottfredson and Hirshi (1990). This variable was composed of a scale constructed from the sum of four dichotomous indicators (1=Yes, 0=No). The indicators are as follows: (1) I often act without stopping to think, (2) Often I feel that I don't have enough control over the direction my life is taking, (3) I become deeply disturbed when someone laughs at me or blames me for something I have done wrong, and (4) I lie often. Higher numbers indicate less self-control. The range is from 0 to 4, with a mean of 1.35 and a standard deviation of 1.11.

Time Spent with Friends

This variable was composed of two continuous indicators of the number of hours spent with friends on weekdays and on the weekends. These indicators were scaled as follows: (1) 0 to 9 hours, (2) 10 to 19 hours, and (3) 20 or more hours. The original researchers did not include any responses greater than 35 hours. The range is from 1 to 3, with a mean of 1.62 and a standard deviation of 0.49.

Mother's Binge Drinking

This variable was composed of a single indicator response to whether the mother regularly drank alcohol excessively over a long period of time (1=Yes, 0=No). The range is from 0 to 1, with a mean of 0.07 and a standard deviation of 0.25.

Contact with Father

This variable was composed of a single indicator of contact with the respondent's biological father (1= Contact, 0=No Contact). The range is from 0 to 1, with a mean of 0.06 and a standard deviation of 0.24.

Father's Involvement

This variable was composed of eleven indicators of how often the respondent did any of the following with their father: (1) discuss personal problems, (2) openly shows affecting towards you, (3) discusses his problems with you, (4) you show affection towards him, (5) you discuss things that happened at school with him, (6) talks to your teachers to find out how you are doing at school, (7) helps you with your school work, (8) attends the parent open house to meet your teachers, (9) volunteers to help out at your school, (10) encourages you to become involved in extracurricular activities in school, and (11) encourages you to do better in school. Responses are coded as (1) hardly ever or never, (2) sometimes, and (3) often. These scores were added and scaled from 0 to 1. The range is from 0.33 to 1, with a mean of 0.66 and a standard deviation of 0.14.

Both Parents

This variable is composed of a single, dichotomous indicator of whether the child lives with both parents (1=Yes, 0=No). The range is from 0 to 1, with a mean of 0.94 and a standard deviation of 0.24.

Parent Closeness

This variable was composed of a single dichotomous indicator of how close the child feels to their parents (1=Close, 0=Not Close). The range is from 0 to 1, with a mean of 0.89 and a standard deviation of 0.31.

Parent Supervision

This variable is composed of ten dichotomous indicators (1=Yes, 0=No). The series of questions asks whether the respondents parents have definite rules about: (1) helping around the house, (2) eating dinner with the family, (3) homework, (4) time spent watching television, (5) dress and hair, (6) time for being in at night, (7) not hanging around with certain kinds of kids, (8) not smoking, (9) not drinking alcohol, and (10) not using drugs. Higher scores indicate more supervision. The range is from 0 to 10, with a mean of 7.48 and a standard deviation of 1.98.

Socioeconomic Status

The nominal variable for social class was used as a proxy for the respondents' socioeconomic status. Adolescents were asked the following question: "People often think of themselves in terms of social class depending on their job, education or family background. Please look at this card and tell me the number which best describes the social class you think you are in. For the purposes of this study, the responses were reversed coded so that 1 = Lower class, 2 = Working class, 3 = Lower-middle class, 4 = Middle class, 5 = Upper-middle class, and 6 = Upper class. The values of this variable

ranged from 1 to 6, with a mean of 4.21 and a standard deviation of 0.96. The majority of the sample (44.5 percent) reported that they were middle class. Although there is not specific evidence indicating a link between the self-esteem and/or negative affect of those bearing stigmatizing characteristics with their socioeconomic status, some other studies have pointed out that socioeconomic status is related to both self-derogation (Twenge and Campbell 2002) and depression (Link, Lennon, and Dohrenwend 1993).

Data Analysis

A variety of descriptive, bivariate and multivariate analyses were conducted in order to address the research questions. This section presents in a detailed manner the different strategies utilized to analyzing the data.

Descriptive Analysis

Descriptive analyses were conducted in order to examine each variable's distribution and variability in the study sample. In addition to providing lower and maximum values for each of the variables under study, this analysis included means and standard deviations, as well as indicators of skewness and kurtosis. This information allowed me to understand why the different variables under study perform the way they did in multivariate analysis.

As Table 1 indicates, the variables showing the largest amount of skewness and kurtosis are the juvenile delinquency, violence and property offense variables as well as the depression variable, whereas the demographic and control variables appear to be

normal. According to Lewis-Beck (1995) if skewness exceeds 0.8 in absolute value, in either direction, the distribution of the data can be said to be skewed. With regard to kurtosis, Acock (2006) indicates that if its value is greater than 20, there may be a serious problem with the data.

Table 1. Distribution of Study Variables

Variables	N	Range	Mean	SD	Skew.	Kurt.
Juvenile Delinquency	2889	0-1	0.04	(0.08)	2.82	8.19
Property Offenses	2889	0-1	0.04	(0.09)	2.78	7.54
Violent Offenses	2894	0-1	0.03	(0.09)	2.32	3.67
Self Derogation	2842	0-1	0.31	(0.35)	0.76	-0.76
Anxiety	2821	0-1	0.32	(0.26)	0.59	-0.56
Depression	2837	0-1	0.11	(0.24)	2.32	4.86
Agency	2689	0-1	0.81	(0.19)	-1.12	0.83
Identity	2726	0-1	0.76	(0.17)	-0.86	0.83
Anger	2748	0-1	0.25	(0.21)	0.92	0.57
Happiness	2815	0-1	0.56	(0.39)	-0.22	-1.46
No Incarceration	2894	0-1	0.79	(0.41)	-0.41	-0.02
Incarceration Before Birth	2894	0-1	0.07	(0.26)	0.32	0.01
Incarceration Before Age 12	2894	0-1	0.09	(0.28)	0.94	0.64
Incarceration Between Ages 12-18	2894	0-1	0.02	(0.14)	0.98	0.78
Child White	2852	0-1	0.56	(0.50)	-0.26	-1.94
Child Black	2852	0-1	0.31	(0.46)	0.83	-1.31
Child Hispanic	2852	0-1	0.13	(0.33)	0.22	0.93
Child Age	2894	11-18	13.29	(1.89)	0.14	0.11
Gender (Male = 1)	2894	0-1	0.52	(0.50)	-0.07	-2.00
Child Religious Attendance	2651	1-5	3.83	(1.43)	-0.87	-0.74
Child Sexual Abuse	2894	0-1	0.01	(0.09)	0.63	1.96
Child School Performance	2701	0-1	0.78	(0.16)	-0.73	-0.01
Child School Attachment	2716	1-7	6.07	(1.10)	-1.37	1.86
Time with Friends	1993	1-3	1.62	(0.49)	0.45	-0.52
Child Low Self Control	2818	0-4	1.35	(1.11)	0.54	-0.47
Family SES	2555	1-6	4.21	(0.96)	-0.65	1.16
Mother's Binge Drinking	2894	0-1	0.07	(0.25)	0.48	1.09
Both Parents	2894	0-1	0.94	(0.24)	-0.72	1.81
No Contact	2894	0-1	0.06	(0.24)	0.60	1.99
Parent Closeness	2894	0-1	0.89	(0.31)	-0.55	0.50
Parent Supervision	2724	0-10	7.48	(1.98)	-1.05	1.31

Table 1. Continued

Variables	N	Range	Mean	SD	Skew.	Kurt.
Father White	2841	0-1	0.57	(0.50)	-0.27	-1.93
Father Black	2841	0-1	0.31	(0.46)	0.81	-1.34
Father Hispanic	2841	0-1	0.12	(0.33)	0.32	0.41
Family Income	2782	1500-75000	48632.64	(21501.27)	-0.38	-1.03
Father Involvement	2028	0-1	0.66	(0.14)	-0.11	-0.64
Father Prior Deviance	2883	0-1	0.10	(0.10)	0.82	0.72
Father Drug Use	2886	0-1	0.17	(0.12)	0.49	1.47
Father Education	2894	1-11	6.92	(2.31)	-0.62	0.10

Correlational Analysis

Correlation analyses were conducted in order to determine the strength and direction of the relationships among the different variables analyzed in this study. Zero order correlations matrixes provide also a general picture to support the reviewed literature, and the hypotheses under study. The inter-correlations among the study variables were compared in order to determine whether the pattern of inter-correlations among study variables show any signs of multicollinearity (Kaplan and Lin 2000).

Structural Equation Model Analysis

Structural equation modeling (SEM) represents a theory-driven data analytical approach for the evaluation of a priori specified hypotheses about causal relations among measured and/or latent variables. SEM is an analytical process involving model conceptualization, parameter identification and estimation, data-model fit assessment, and potential model respecification. Ultimately, this process allows for the assessment of fit between correlational data and one or more competing causal theories specified a priori (Hancock and Mueller 2010).

The computer program Mplus was employed to obtain path estimates, using maximum likelihood (ML) estimation, and to evaluate the overall fit of the models tested. SEM allows for measurement error of a given latent construct and tests the entire model in the same analysis. In order to model measurement error of a given construct, however, the latent construct must be measured by more than one parceled variable (Bollen, 1989). For each latent variable in the model, therefore, the author identified at least two indicators. By using maximum likelihood estimation, all parameters are estimated simultaneously so that error in any given parameter is reflected in all other parameters estimated (Muthén 1984). Therefore the analyses performed assess both the measurement models and the structural models simultaneously via the maximum likelihood estimates. The variances of the exogenous control variables are allowed to correlate freely. The measurement errors of the intervening variables are assumed to be random and thus uncorrelated in the estimation. A consensus has been reached among structural equation modeling experts that model fit should be assessed by multiple fit indices that take into account the testing situation (Hu and Bentler, 1995). Aside from Chi Square, Hu and Bentler (1995) suggests the following fit index cut off value guide for good models with continuous outcomes: Tucker Lewis index (TLI) > .95, comparative fit index (CFI) > .95 and root mean square error of approximation (RMSEA) < .06.

When a model does not fit well, a modification can be guided by modification indices. For the case where all dependent variables are continuous and multivariate normal, Sörbom (1989) proposed an index called, modification index (MI). It is a

measure of how poorly a particular parameter constraint is chosen. For a parameter that is not freely estimated but either fixed or constrained to be equal to another parameter, MI gives the expected drop in the likelihood ration chi-square statistic when this parameter is freed. An expected parameter change (EPC) statistic is also useful in evaluating possible model modifications (Saris et al. 1987). Parameters are clearly in need of being freed only when the MI values are large and the EPC values are large.

Model Comparisons

When two models, say Model 1 and Model 2, are nested (such as when the estimated parameters in the former are a proper subset of those associated with the latter) fit comparisons can be accomplished with a formal χ^2 difference test also referred to as a *likelihood ratio test* (Hancock and Mueller 2010). That is, if Model 1 (with df_1) is nested within Model 2 (with df_2), their χ^2 fit statistics may be statistically compared by $\Delta \chi^2_{(df1 - df2)} = \chi^2_{(df1)} - \chi^2_{(df2)}$, which itself follows a χ^2 distribution with $df = df_1 - df_2$ (under conditions of multivatiate normality and reasonable models).

CHAPTER IV

RESULTS

This chapter presents the main findings obtained by this study. The first section outlines the descriptive statistics of the independent variables, including a comparison between racial and gender groups. The second section establishes an association between paternal incarceration and delinquency. The third section presents the results of the baseline structural model analyzing the hypothesized relationship between paternal incarceration and their children's level of self-reported delinquency. To conclude, the fourth section examines the outcomes of the mediation analysis.

Descriptive Findings

I computed means and standard deviations for all the variables used in the analysis for the total sample differentiated by gender. In addition, this section presents the results of t-tests aimed at determining group differences according to gender. As indicated by Table 2, the sample consists of about 56 percent White children, 30 percent Black children, and 14 percent Hispanic children. The sample is 52 percent male and 48 percent female.

Boys in the sample reported significantly higher mean levels of delinquent behavior than girls for total delinquency, property offenses and violent offenses. Girls in the sample reported significantly higher levels of depression and sexual victimization.

Table 2. Descriptive Statistics by Child Gender

	Boys		Girls	
Variables	Mean	SD	Mean	SD
Dependent Variables				
Juvenile Delinquency	0.05	(0.09)	> 0.02**	(0.05)
Property Offenses	0.05	(0.10)	> 0.03**	(0.06)
Violent Offenses	0.05	(0.10)	> 0.02**	(0.07)
Mediating Variables				
Self Derogation	0.30	(0.34)	0.32	(0.36)
Anxiety	0.32	(0.26)	0.31	(0.27)
Depression	0.11	(0.24)	0.11	(0.24)
Agency	0.79	(0.20)	< 0.82*	(0.19)
Identity	0.76	(0.17)	0.76	(0.17)
Anger	0.26	(0.21)	0.24	(0.21)
Happiness	0.58	(0.39)	0.53	(0.40)
Independent Variables				
No Incarceration	0.79	(0.41)	0.78	(0.41)
Incarceration Before Birth	0.07	(0.26)	0.07	(0.26)
Incarceration Before Age 12	0.09	(0.29)	0.08	(0.28)
Incarceration Between Ages 12-18	0.02	(0.13)	0.02	(0.15)
N	1414		1308	

*p < .05 **p < .01

Table 2. (continued)

	Boys		Girls	
Variables	Mean	SD	Mean	SD
Control Variables				
Child Age	13.24	(1.86)	13.34	(1.92)
Child Race				
White	0.57	(0.50)	0.56	(0.50)
Black	0.31	(0.46)	0.31	(0.46)
Hispanic	0.12	(0.33)	0.13	(0.34)
Child Religious Attendance	3.79	(1.45)	3.88	(1.40)
Child Sexual Abuse	0.00	(0.06)	< 0.01*	(0.12)
Child School Performance	0.76	(0.17)	< 0.81**	(0.15)
Child School Attachment	5.99	(1.14)	< 6.16**	(1.04)
Time with Friends	1.65	(0.51)	1.58	(0.48)
Child Low Self Control	1.76	(1.13)	> 1.30*	(1.09)
Family SES	4.18	(1.00)	4.25	(0.92)
Mother's Binge Drinking	0.07	(0.25)	0.07	(0.25)
Both Parents	0.94	(0.25)	0.95	(0.23)
No Contact	0.06	(0.23)	0.07	(0.25)
Parent Closeness	0.90	(0.30)	> 0.88*	(0.32)
Parent Supervision	7.41	(2.05)	7.55	(1.89)
Father Race				
White	0.57	(0.50)	0.56	(0.50)
Black	0.31	(0.46)	0.32	(0.46)
Hispanic	0.12	(0.33)	0.12	(0.33)
Family Income	48627.34	(21364.59)	48638.33	(21655.16)
Father Involvement	0.67	(0.15)	0.66	(0.14)
Father Prior Deviance	0.10	(0.10)	0.10	(0.11)
Father Drug Use	0.17	(0.13)	0.17	(0.12)
Father Education	6.91	(2.29)	6.93	(2.33)
N	1414		1308	

*p < .05 **p < .01

I also computed means and standard deviations for all of the study variables differentiated by father's history of incarceration. In addition, this section presents the results of t-tests aimed at determining group differences according to incarceration. Table 3 indicates that 17 percent of the children in the sample have experienced paternal

incarceration. The first column includes children whose fathers reported never being incarcerated in jail or prison while the children in the second column includes children whose fathers did report having been incarcerated. As Table 3 shows, these two groups differ significantly on several parameters. Children with incarcerated fathers report higher mean levels of delinquency, both violent and property offenses. They also report higher levels of depression and anger as well as lower levels of agency. On the other hand, children with never incarcerated fathers report significantly greater mean levels of self-control, a greater likelihood that they live with both parents, higher family income, lower paternal deviance, and higher paternal educational attainment.

Table 3. Descriptive Statistics by Father's History of Incarceration

	No Incarceration		Incarceration	
Variables	Mean	SD	Mean	SD
Dependent Variables				
Juvenile Delinquency	0.03	(0.07)	< 0.06*	(0.10)
Property Offenses	0.03	(0.07)	< 0.06*	(0.12)
Violent Offenses	0.03	(0.08)	< 0.06*	(0.11)
Mediating Variables				
Self Derogation	0.30	(0.35)	0.34	(0.35)
Anxiety	0.31	(0.26)	0.34	(0.27)
Depression	0.10	(0.22)	< 0.14*	(0.28)
Agency	0.82	(0.18)	> 0.75**	(0.21)
Identity	0.77	(0.17)	0.73	(0.18)
Anger	0.23	(0.20)	< 0.30**	(0.22)
Happiness	0.55	(0.39)	0.59	(0.40)
N	2251		471	

*p < .05 **p < .01

Table 3. (continued)

	No Incarceration		Incarceration	
Variables	Mean	SD	Mean	SD
Control Variables				
Child Male	0.52	(0.50)	0.51	(0.50)
Child Age	13.14	(1.80)	13.84	(2.10)
Child Race				
White	0.61	(0.49)	0.39	(0.49)
Black	0.27	(0.44)	0.45	(0.50)
Hispanic	0.12	(0.33)	0.16	(0.37)
Child Religious Attendance	3.91	(1.40)	> 3.56**	(1.48)
Child Sexual Abuse	0.01	(0.08)	< 0.02*	(0.13)
Child School Performance	0.79	(0.16)	> 0.73**	(0.16)
Child School Attachment	6.12	(1.08)	> 5.88**	(1.15)
Time with Friends	1.60	(0.49)	1.67	(0.52)
Child Low Self Control	1.30	(1.09)	< 1.54**	(1.16)
Family SES	4.28	(0.92)	> 3.98*	(1.08)
Mother's Binge Drinking	0.05	(0.22)	< 0.13**	(0.34)
Both Parents	0.96	(0.21)	> 0.88**	(0.32)
No Contact	0.05	(0.21)	0.12	(0.33)
Parent Closeness	0.90	(0.30)	0.87	(0.34)
Parent Supervision	7.57	(1.92)	7.13	(2.18)
Father Race				
White	0.62	(0.49)	0.37	(0.48)
Black	0.27	(0.45)	0.46	(0.50)
Hispanic	0.11	(0.31)	0.18	(0.38)
Family Income	52293.24	(19761.81)	>34172.60**	(22012.28)
Father Involvement	0.67	(0.14)	0.64	(0.15)
Father Prior Deviance	0.08	(0.08)	< 0.17**	(0.13)
Father Drug Use	0.15	(0.11)	< 0.24**	(0.15)
Father Education	7.27	(2.20)	> 5.63**	(2.26)
N	2251		471	

*p < .05 **p < .01

Bivariate Analysis

This section presents zero-order correlations between all variables included in the analysis. As indicated at the bottom of the Table 4 the zero-order correlations reported in this section were significant at levels $p < .05$, or .01 (two-tailed test). Table 4 presents correlations between study variables.

Of the study variables, most were found to be significantly associated with the dependent variable juvenile delinquency, namely the focal bivariate association with paternal incarceration as well as all of the mediators under investigation. No incarceration is not associated with all delinquency ($r = -0.136$, $p < .01$). Incarceration before birth is associated with violent offenses ($r = 0.041$, $p < .05$). Incarceration before age 12 is associated with property offenses ($r = .054$, $p < .01$). Incarceration after age 12 is associated with all delinquency ($r = .161$, $p < .01$). All of these associations are statistically significant. Also, there are no strong associations among any of the predictor variables.

Table 4. Pearson Product Momentum Correlations between Study Variables

	Happiness	No Incarceration	Incarceration Before Birth	Incarceration Before Age 12	Incarceration Between Ages 12-18
Juvenile Delinquency					
Property Offenses					
Violent Offenses					
Self Derogation					
Anxiety					
Depression					
Agency					
Identity					
Anger					
Happiness	1				
No Incarceration	-.035	1			
Incarceration Before Birth	-.023	-.536**	1		
Incarceration Before Age 12	.057**	-.593**	-.086**	1	
Incarceration Between Ages 12-18	.024	-.270**	-.039*	-.043*	1

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

Table 4. (continued)

	Juvenile Delinquency	Property Offenses	Violent Offenses	Self Derogation	Anxiety	Depression	Agency	Identity	Anger
Juvenile Delinquency	1								
Property Offenses	.982**	1							
Violent Offenses	.751**	.614**	1						
Self Derogation	.163**	.163**	.112**	1					
Anxiety	.195**	.186**	.163**	.460**	1				
Depression	.185**	.172**	.171**	.302**	.270**	1			
Agency	-.287**	-.268**	-.261**	-.413**	-.441**	-.323**	1		
Identity	-.304**	-.301**	-.221**	-.325**	-.316**	-.376**	.433**	1	
Anger	.348**	.333**	.290**	.498**	.549**	.434**	-.544**	-.464**	1
Happiness	.057**	.060**	.029	.057**	.054**	-.147**	-.074**	.011	.004
No Incarceration	-.136**	-.132**	-.107**	-.045*	-.045*	-.077**	.160**	.087**	-.130**
Incarceration Before Birth	.032	.027	.041*	.034	.009	.008	-.056**	-.017	.008
Incarceration Before Age 12	.053**	.054**	.031	.023	.018	.056**	-.109**	-.071**	.106**
Incarceration Between Ages 12-18	.161**	.160**	.110**	.006	.055**	.029	-.047*	-.059**	.100**

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

Table 4. (continued)

	Child Male	Child Religious Attendance	Child Sexual Abuse	Child School Performance	Child School Attachment	Time with Friends	Child Low Self Control	Family SES
Child White								
Child Black								
Child Hispanic								
Child Age								
Child Male	1							
Child Religious Attendance	-.034	1						
Child Sexual Abuse	-.059**	-.040*	1					
Child School Performance	-.166**	.138**	-.021	1				
Child School Attachment	-.080**	.134**	-.034	.324**	1			
Time with Friends	.067**	-.138**	.007	-.179**	-.080**	1		
Child Low Self Control	.049**	-.070**	.075**	-.278**	-.279**	.096**	1	
Family SES	-.040*	.089**	-.009	.255**	.190**	-.048*	-.147**	1

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

Table 4. (continued)

	Happiness	No Incarceration	Incarceration Before Birth	Incarceration Before Age 12	Incarceration Between Ages 12-18	Child White	Child Black	Child Hispanic	Child Age
Child White	-.078**	.184**	-.006	-.112**	-.118**	1			
Child Black	.089**	-.164**	-.004	.116**	.094**	-.758**	1		
Child Hispanic	-.006	-.046*	.014	.006	.045*	-.437**	-.256**	1	
Child Age	.138**	-.152**	-.007	.082**	.247**	-.196**	.169**	.056**	1
Child Male	.061**	.008	.003	.015	-.025	.011	-.003	-.012	-.027
Child Religious Attendance	.012	.099**	-.089**	-.031	-.031	-.072**	.138**	-.085**	-.121**
Child Sexual Abuse	.022	-.052**	-.026	.024	.095**	-.023	.011	.020	.122**
Child School Performance	-.056**	.154**	-.045*	-.114**	-.039*	.245**	-.166**	-.136**	-.242**
Child School Attachment	.003	.086**	-.045*	-.058**	-.017	.062**	-.019	-.066**	-.030
Time with Friends	.021	-.057*	.000	.054*	.054*	-.068**	.029	.063**	.205**
Child Low Self Control	.051**	-.088**	.035	.047*	.069**	-.045*	-.009	.079**	.067**
Family SES	-.041*	.124**	-.049*	-.071**	-.064**	.071**	-.012	-.092**	-.206**

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

Table 4. (continued)

	Juvenile Delinquency	Property Offenses	Violent Offenses	Self Derogation	Anxiety	Depression	Agency	Identity	Anger
Child White	-.102**	-.084**	-.136**	.032	-.048*	-.072**	.174**	.086**	-.148**
Child Black	.026	.012	.067**	-.087**	.007	.029	-.121**	-.030	.088**
Child Hispanic	.116**	.107**	.110**	.073**	.061**	.067**	-.090**	-.085**	.098**
Child Age	.432**	.447**	.244**	.056**	.071**	.106**	-.116**	-.205**	.216**
Child Male	.158**	.151**	.133**	-.029	.008	-.006	-.090**	-.008	.062**
Child Religious Attendance	-.154**	-.156**	-.098**	-.046*	-.085**	-.090**	.118**	.116**	-.112**
Child Sexual Abuse	.086**	.077**	.091**	.065**	.064**	.063**	-.086**	-.059**	.100**
Child School Performance	-.285**	-.270**	-.234**	-.160**	-.260**	-.192**	.384**	.313**	-.316**
Child School Attachment	-.199**	-.190**	-.158**	-.239**	-.284**	-.279**	.323**	.302**	-.338**
Time with Friends	.221**	.218**	.166**	.048*	.091**	.076**	-.130**	-.143**	.147**
Child Low Self Control	.247**	.234**	.216**	.447**	.513**	.271**	-.523**	-.337**	.573**
Family SES	-.172**	-.166**	-.139**	-.134**	-.149**	-.201**	.190**	.227**	-.176**

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

Table 4. (continued)

	Father Involvement	Father Prior Deviance	Father Drug Use	Father Education
Father Involvement	1			
Father Prior Deviance	-.100**	1		
Father Drug Use	-.103**	.606**	1	
Father Education	.170**	-.215**	-.124**	1

*p < .05, **p

Table 4. (continued)

	Mother's Binge Drinking	Both Parents	No Contact	Parent Closeness	Parent Supervision	Father White	Father Black	Father Hispanic	Family Income
Mother's Binge Drinking	1								
Both Parents	-.120**	1							
No Contact	.045*	-.079**	1						
Parent Closeness	-.105**	.106**	-.072**	1					
Parent Supervision	-.061**	.006	-.031	.160**	1				
Father White	-.035	.101**	-.061**	.026	.007	1			
Father Black	.043*	-.094**	.071**	-.007	.049*	-.771**	1		
Father Hispanic	-.008	-.021	-.008	-.030	-.080**	-.424**	-.250**	1	
Family Income	-.088**	.128**	-.148**	.047*	.039*	.305**	-.265**	-.088**	1
Father Involvement	-.003	-.018	-.126**	.247**	.348**	.044	-.004	-.058**	.096**
Father Prior Deviance	.141**	-.082**	.123**	-.055**	-.102**	-.076**	.039*	.061**	-.214**
Father Drug Use	.151**	-.075**	.095**	-.050**	-.119**	.037*	-.051**	.017	-.155**
Father Education	-.103**	.082**	-.083**	.079**	.097**	.205**	-.041*	-.252**	.408**

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

Table 4. (continued)

	Child Male	Child Religious Attendance	Child Sexual Abuse	Child School Performance	Child School Attachment	Time with Friends	Child Low Self Control	Family SES
Mother's Binge Drinking	-.003	-.099**	.095**	-.101**	-.074**	.106**	.113**	-.094**
Both Parents	-.022	.005	-.055**	.107**	.037	-.080**	-.016	.079**
No Contact	-.026	-.032	.022	-.071**	-.049*	-.012	.010	-.057**
Parent Closeness	.029	.083**	-.077**	.130**	.139**	-.080**	-.182**	.135**
Parent Supervision	-.037	.184**	-.045*	.099**	.077**	-.180**	-.048*	.084**
Father White	.006	-.065**	-.016	.238**	.062**	-.068**	-.043*	.084**
Father Black	-.006	.142**	.010	-.176**	-.015	.039	-.006	-.022
Father Hispanic	.000	-.106**	.011	-.113**	-.073**	.049*	.075**	-.100**
Family Income	.000	.036	-.048*	.228**	.155**	-.044	-.074**	.213**
Father Involvement	.023	.114**	-.011	.200**	.175**	-.186**	-.182**	.191**
Father Prior Deviance	-.007	-.098**	.037*	-.112**	-.090**	.091**	.094**	-.090**
Father Drug Use	.003	-.101**	.042*	-.084**	-.085**	.094**	.084**	-.101**
Father Education	-.005	.156**	-.065**	.255**	.144**	-.121**	-.103**	.206**

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

Table 4. (continued)

	Happiness	No Incarceration	Incarceration Before Birth	Incarceration Before Age 12	Incarceration Between Ages 12-18	Child White	Child Black	Child Hispanic	Child Age
Mother's Binge Drinking	-.002	-.132**	.044*	.065**	.073**	-.033	.041*	-.008	.096**
Both Parents	-.050**	.122**	-.020	-.067**	-.113**	.099**	-.091**	-.021	-.241**
No Contact	-.006	-.130**	.016	.112**	.098**	-.070**	.080**	-.007	.167**
Parent Closeness	.040*	.042*	-.021	-.045*	-.016	.023	-.011	-.018	-.231**
Parent Supervision	.049*	.088**	-.018	-.044*	-.092**	-.008	.053**	-.062**	-.260**
Father White	-.072**	.209**	-.040*	-.116**	-.119**	.942**	-.766**	-.341**	-.203**
Father Black	.094**	-.162**	-.008	.120**	.093**	-.762**	.988**	-.243**	.174**
Father Hispanic	-.023	-.087**	.072**	.005	.050**	-.350**	-.246**	.874**	.062**
Family Income	-.063**	.338**	-.087**	-.259**	-.161**	.288**	-.262**	-.066**	-.189**
Father Involvement	.039	.079**	-.028	-.083**	-.033	.049*	-.003	-.066**	-.229**
Father Prior Deviance	-.005	-.371**	.207**	.216**	.147**	-.066**	.036	.048*	.130**
Father Drug Use	-.013	-.288**	.132**	.180**	.078**	.046*	-.050**	.000	.113**
Father Education	-.061**	.289**	-.106**	-.175**	-.122**	.190**	-.038*	-.230**	-.234**

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

Table 4. (continued)

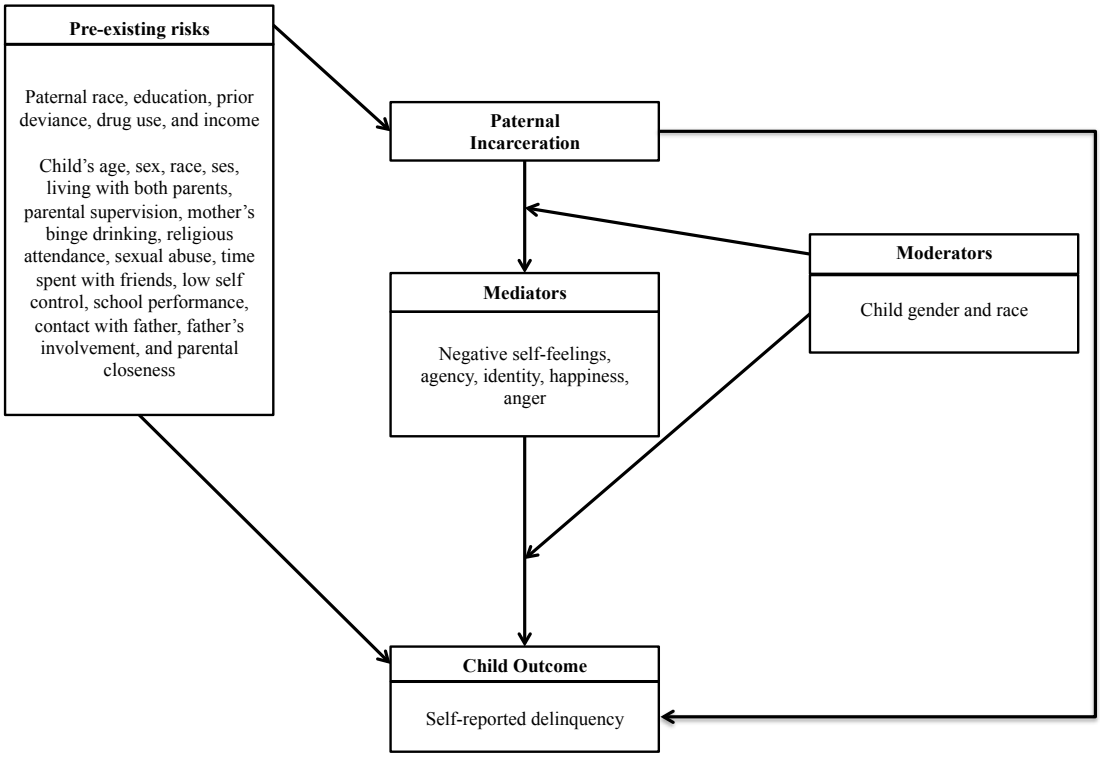
	Juvenile Delinquency	Property Offenses	Violent Offenses	Self Derogation	Anxiety	Depression	Agency	Identity	Anger
Mother's Binge Drinking	.191**	.188**	.142**	.082**	.083**	.080**	-.159**	-.161**	.145**
Both Parents	-.191**	-.187**	-.143**	-.046*	-.027	-.070**	.078**	.085**	-.074**
No Contact	.065**	.061**	.056**	.018	.025	.032	-.033	-.076**	.047*
Parent Closeness	-.232**	-.229**	-.170**	-.220**	-.176**	-.323**	.246**	.490**	-.299**
Parent Supervision	-.264**	-.272**	-.145**	-.009	-.045*	-.096**	.080**	.240**	-.117**
Father White	-.108**	-.091**	-.133**	.048*	-.049**	-.062**	.175**	.077**	-.131**
Father Black	.026	.014	.059**	-.084**	.009	.024	-.118**	-.023	.086**
Father Hispanic	.127**	.118**	.118**	.047*	.061**	.059**	-.098**	-.084**	.076**
Family Income	-.118**	-.099**	-.151**	-.036	-.056**	-.095**	.210**	.124**	-.142**
Father Involvement	-.197**	-.198**	-.119**	-.112**	-.188**	-.209**	.209**	.454**	-.247**
Father Prior Deviance	.139**	.132**	.118**	.043*	.082**	.056**	-.114**	-.127**	.127**
Father Drug Use	.153**	.150**	.114**	.059**	.078**	.050**	-.110**	-.137**	.131**
Father Education	-.183**	-.177**	-.149**	-.080**	-.108**	-.138**	.193**	.172**	-.194**

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

Baseline Model Findings

The conceptual model is presented in Figure 1. This demonstrates the direction of the associations observed in this study.

Figure 1. Conceptual Model



The baseline (unmediated) model tests the effect of paternal incarceration on children's delinquency, controlling on a litany of individual and family level variables.

The results of this model are presented in Figure 2 and Table 5. While all paths are estimated, only those that are statistically significant ($p < .05$) are presented.

The baseline model is a test of H1:

H1: Experiencing paternal incarceration is positively associated with increased delinquency in adolescence, net of other risk factors.

The unmediated path model is presented in Figure 2. The goodness of fit indices demonstrate a good fit of the model to the data. The coefficient for incarceration is (β = .06). This suggests that paternal incarceration when the child is 12 years or older predicts juvenile delinquency only modestly. Still the effect remaining is noteworthy since it remains, independent of control variables and in spite of the long period of the conservative incarceration estimate.

As expected several other variables are significantly related to the reporting of juvenile delinquency. Boys (β = .02) and older children (β = .04) are significantly more likely to report higher delinquency. Children who feel experience less parental supervision (β = .-0003), have mothers who binge drink (β = .02), and spend more time with their friends (β = .02) also report higher delinquency. Those with lower school attachment (β = -.007), lower self-control (β = .005), do worse in school (β = -.06), and who do not feel close to their parents (β = -.02) also report higher delinquency. This is evidence that H1 is supported.

Figure 2. Baseline (Unmediated) Model

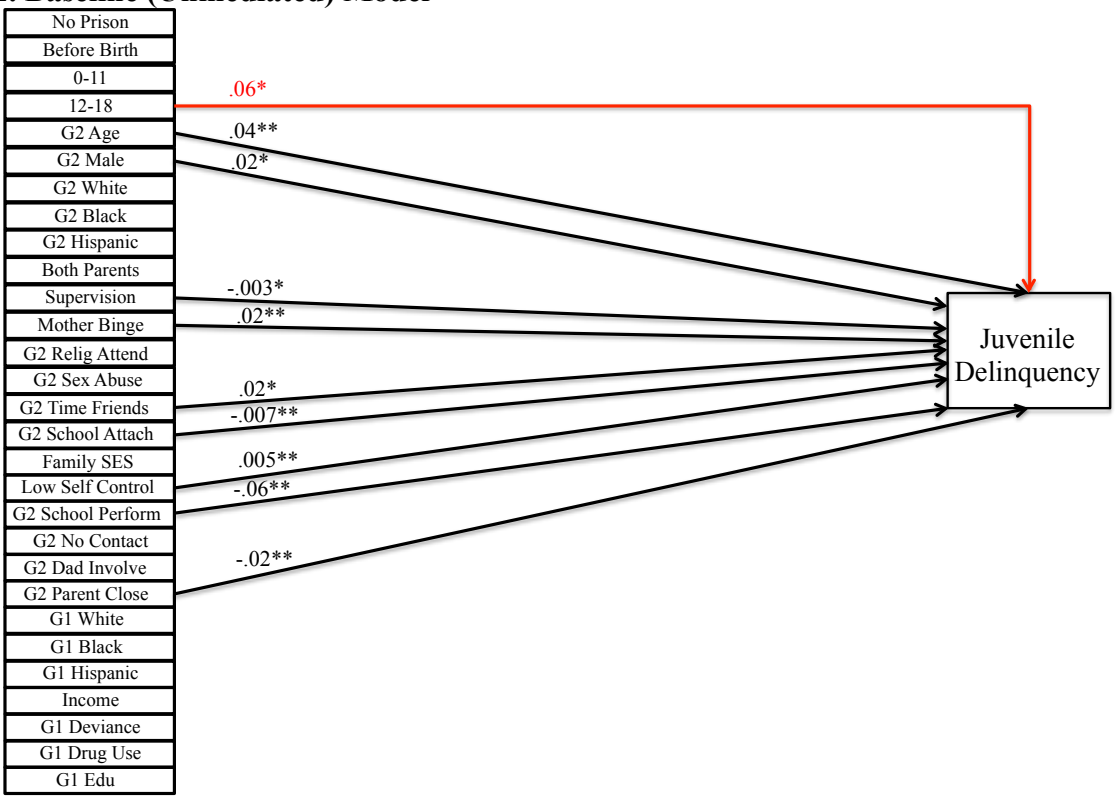


Table 5. Standardized Structural Coefficients on Delinquency

Independent → Dependent	I Baseline	II Kaplan	III Giordano	IV All
No Incarceration → Delinquency	0.01	0.01	0.01	0.01
No Incarceration → Negative Self-Feelings		0.07		0.07
No Incarceration → Agency			0.04	0.03
No Incarceration → Identity			0.001	0.00
No Incarceration → Anger			-0.03	-0.03
No Incarceration → Happiness			0.07	0.05
Incarceration Before Birth → Delinquency	0.01	0.01	0.01	0.01
Incarceration Before Birth → Negative Self-Feelings		0.50		0.47
Incarceration Before Birth → Agency			-0.01	0.00
Incarceration Before Birth → Identity			0.02	0.02
Incarceration Before Birth → Anger			-0.02	-0.02
Incarceration Before Birth → Happiness			0.10	0.10
Incarceration Before Age 12 → Delinquency	0.02	0.02	0.02	0.01
Incarceration Before Age 12 → Negative Self-Feelings		0.03		0.03
Incarceration Before Age 12 → Agency			0.17	0.19
Incarceration Before Age 12 → Identity			0.03	0.03
Incarceration Before Age 12 → Anger			0.01	0.01
Incarceration Before Age 12 → Happiness			-0.07	-0.05
Incarceration Between Ages 12-18 → Delinquency	0.06*	0.046*	0.035*	0.023*
Incarceration Between Ages 12-18 → Negative Self-Feelings		0.18*		0.16*
Incarceration Between Ages 12-18 → Agency			0.12	0.11
Incarceration Between Ages 12-18 → Identity			-.027*	-.027*
Incarceration Between Ages 12-18 → Anger			0.06*	0.06*
Incarceration Between Ages 12-18 → Happiness			-0.04**	-0.01
Negative Self-Feelings → Delinquency		0.15*		0.15*
Agency → Delinquency			0.26	0.08
Identity → Delinquency			0.09*	0.03
Anger → Delinquency			0.13*	0.12*
Happiness → Delinquency			0.05	0.07
Child White → Delinquency	0.04	0.03	0.03	0.03
Child White → Negative Self-Feelings		0.03		0.01
Child White → Agency			0.04	0.04
Child White → Identity			0.10	0.11
Child White → Anger			0.00	0.00
Child White → Happiness			0.00	0.00
Child Black → Delinquency	0.02	0.00	0.00	0.00
Child Black → Negative Self-Feelings		-0.30		0.00
Child Black → Agency			-0.002	-0.001
Child Black → Identity			-0.10	-0.13
Child Black → Anger			0.05	0.05
Child Black → Happiness			0.03	0.02

*p < .05 **p < .01

Table 5. (continued)

Independent → Dependent	I Baseline	II Kaplan	III Giordano	IV All
Child Hispanic → Delinquency	0.01	0.00	0.00	0.00
Child Hispanic → Negative Self-Feelings		-0.004		0.00
Child Hispanic → Agency			-0.06	-0.03
Child Hispanic → Identity			-0.001	-0.001
Child Hispanic → Anger			0.04	0.05
Child Hispanic → Happiness			0.11	0.10
Child Age → Delinquency	0.04**	0.00	0.00	0.00
Child Age → Negative Self-Feelings		-0.003		0.00
Child Age → Agency			0.00	0.00
Child Age → Identity			0.01	0.00
Child Age → Anger			0.00	0.00
Child Age → Happiness			0.04**	0.00
Child Male → Delinquency	0.02*	0.01	0.01	0.00
Child Male → Negative Self-Feelings		-0.31		-0.25
Child Male → Agency			-0.01	-0.01
Child Male → Identity			0.02*	0.01
Child Male → Anger			-0.01	0.00
Child Male → Happiness			0.03*	0.03
Child Religious Attendance → Delinquency	-0.001	0.00	0.00	0.00
Child Religious Attendance → Negative Self-Feelings		-0.01		0.00
Child Religious Attendance → Agency			0.002	0.00
Child Religious Attendance → Identity			0.00	0.00
Child Religious Attendance → Anger			0.00	0.00
Child Religious Attendance → Happiness			0.00	0.00
Child Sexual Abuse → Delinquency	-0.02	0.00	0.01	0.00
Child Sexual Abuse → Negative Self-Feelings		-0.12		
Child Sexual Abuse → Agency			0.02	0.02
Child Sexual Abuse → Identity			0.05	0.06
Child Sexual Abuse → Anger			0.12	0.09
Child Sexual Abuse → Happiness			0.20	0.19
Child School Performance → Delinquency	-.06**	-0.14*	-0.05	-0.03
Child School Performance → Negative Self-Feelings		-0.05		-0.03
Child School Performance → Agency			0.13**	0.12
Child School Performance → Identity			0.13**	0.14
Child School Performance → Anger			-0.05	0.09
Child School Performance → Happiness			0.14	0.11
Child School Attachment → Delinquency	-0.007**	0.00	0.00	0.00
Child School Attachment → Negative Self-Feelings		-0.05*		-0.03
Child School Attachment → Agency			0.01**	0.00
Child School Attachment → Identity			0.012**	0.00
Child School Attachment → Anger			-0.03**	0.00
Child School Attachment → Happiness			0.00	0.00

*p < .05 **p < .01

Table 5. (continued)

Independent → Dependent	I Baseline	II Kaplan	III Giordano	IV All
Time with Friends → Delinquency	0.02*	0.00	0.00	0.00
Time with Friends → Negative Self-Feelings		0.01		0.00
Time with Friends → Agency			-0.11	0.00
Time with Friends → Identity			-0.02	0.00
Time with Friends → Anger			0.02	0.00
Time with Friends → Happiness			-0.02	0.00
Child Low Self Control → Delinquency	0.005**	0.00	0.00	0.00
Child Low Self Control → Negative Self-Feelings		0.01**		0.01
Child Low Self Control → Agency			-0.06**	-0.03
Child Low Self Control → Identity			-0.03**	-0.05
Child Low Self Control → Anger			0.08**	0.03
Child Low Self Control → Happiness			0.03*	0.01
Family SES → Delinquency	0.001	0.00	0.00	0.00
Family SES → Negative Self-Feelings		-0.20		-0.17
Family SES → Agency			0.01	0.00
Family SES → Identity			0.01	0.00
Family SES→ Anger			0.00	0.00
Family SES → Happiness			-0.02	0.00
Mother's Binge Drinking → Delinquency	0.02*	0.09*	0.01	0.01
Mother's Binge Drinking → Negative Self-Feelings		0.06		0.03
Mother's Binge Drinking → Agency			-0.04	0.00
Mother's Binge Drinking → Identity			-0.01	0.00
Mother's Binge Drinking → Anger			0.00	0.00
Mother's Binge Drinking → Happiness			0.00	0.00
Both Parents → Delinquency	-0.02	0.00	0.00	0.00
Both Parents → Negative Self-Feelings		-0.08		0/03
Both Parents → Agency			-0.03	0.01
Both Parents → Identity			0.02	0.03
Both Parents → Anger			0.07	0.05
Both Parents → Happiness			-0.30*	-0.23
No Contact → Delinquency	-0.01	0.00	0.00	0.00
No Contact → Negative Self-Feelings		0.03		0.00
No Contact → Agency			-0.004	0.00
No Contact → Identity			-0.01	0.00
No Contact → Anger			-0.03	-0.01
No Contact → Happiness			-0.02	-0.01
Parent Closeness → Delinquency	-.02**	0.00	0.00	0.00
Parent Closeness → Negative Self-Feelings		-0.13		0.03
Parent Closeness → Agency			0.08**	0.06
Parent Closeness → Identity			0.20**	0.22
Parent Closeness → Anger			-0.07**	-0.03
Parent Closeness → Happiness			0.06	-.01

*p < .05 **p < .01

Table 5. (continued)

Independent → Dependent	I Baseline	II Kaplan	III Giordano	IV All
Parent Supervision → Delinquency	-0.003*	0.00	0.00	0.00
Parent Supervision → Negative Self-Feelings		0.01		0.00
Parent Supervision → Agency			-0.01	0.01
Parent Supervision → Identity			0.00	0.00
Parent Supervision → Anger			0.00	0.00
Parent Supervision → Happiness			0.00	0.00
Father White → Delinquency	0.03	0.00	0.00	0.00
Father White → Negative Self-Feelings		0.01		0.02
Father White → Agency			0.00	0.01
Father White → Identity			0.00	0.00
Father White → Anger			0.00	0.00
Father White → Happiness			0.00	0.00
Father Black → Delinquency	-0.02	0.00	0.00	0.00
Father Black → Negative Self-Feelings		0.25		0.03
Father Black → Agency			-0.002	0.00
Father Black → Identity			0.09	0.03
Father Black → Anger			-0.01	0.00
Father Black → Happiness			0.08	0.03
Father Hispanic → Delinquency	0.01	0.01	0.00	0.00
Father Hispanic → Negative Self-Feelings		0.01		0.01
Father Hispanic → Agency			-0.05	0.00
Father Hispanic → Identity			0.00	0.00
Father Hispanic → Anger			-0.23	-0.13
Father Hispanic → Happiness			-0.11	-0.07
Family Income → Delinquency	0.00	0.00	0.00	0.00
Family Income → Negative Self-Feelings		0.00		0.00
Family Income → Agency			0.00	0.00
Family Income → Identity			0.00	0.00
Family Income → Anger			0.00	0.00
Family Income → Happiness			0.00	0.00
Father Involvement → Delinquency	-0.01	0.00	0.00	0.00
Father Involvement → Negative Self-Feelings		-0.06		-0.03
Father Involvement → Agency			0.05	0.00
Father Involvement → Identity			0.34**	0.22
Father Involvement → Anger			-0.07	-0.06
Father Involvement → Happiness			0.18	0.13
Father Prior Deviance → Delinquency	0.01	0.01	0.01	0.00
Father Prior Deviance → Negative Self-Feelings		0.06		0.03
Father Prior Deviance → Agency			0.11	0.14
Father Prior Deviance → Identity			0.06	0.08
Father Prior Deviance → Anger			-0.11	-0.07
Father Prior Deviance → Happiness			-0.06	-0.05

*p < .05 **p < .01

Table 5. (continued)

Independent → Dependent	I Baseline	II Kaplan	III Giordano	IV All
Father Drug Use → Delinquency	0.03	0.02	0.02	0.02
Father Drug Use → Negative Self-Feelings		0.07		0.04
Father Drug Use → Agency			-0.11	-0.13
Father Drug Use → Identity			-0.09	-0.05
Father Drug Use → Anger			0.12*	0.09
Father Drug Use → Happiness			-0.09	-0.06
Father Education → Delinquency	0.00	-.029**	-.029**	0.12
Father Education → Negative Self-Feelings		0.00		0.00
Father Education → Agency			-0.01*	0.00
Father Education → Identity			0.00	0.00
Father Education → Anger			-0.01*	0.00
Father Education → Happiness			-0.01	0.00
Chi Square (df)	383.07 (45)	398.2 7 (56)	696.15 (83)	969.64 (145)
CFI/TFI	0.98/0.96	0.99/0.97	0.98/0.96	0.98/0.96
RMSEA	0.02	0.04	0.06	0.06

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

Mediation Analysis Findings

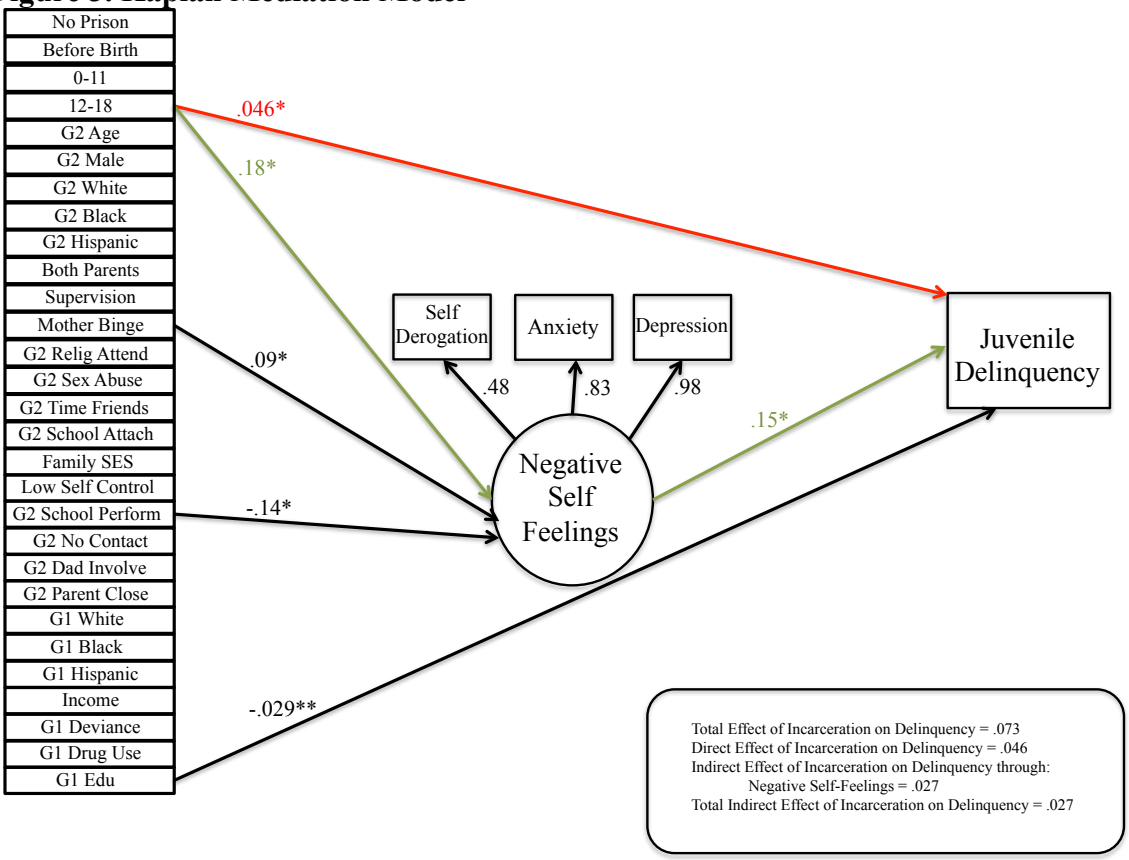
The first mediated model tests the effects of children's negative self-feelings on the relationship between paternal incarceration and children's delinquency, net of controls. Adding negative self-feelings to the model allows us to begin decomposing the relationship between paternal incarceration and children's delinquency. Figure 3 includes the negative self-feelings latent variable composed of self-derogation, anxiety, and depression. The same control variables are included as in the baseline model in Figure 2.

The Kaplan mediation model is a test of H2:

H2: Experiencing paternal incarceration is positively associated with negative self-feelings, which increases delinquency in adolescence, net of other risk factors.

The coefficient for the association between incarceration and delinquency has been reduced to ($\beta = 0.046$). Including negative self-feelings in the model accounts for a 23 percent reduction in the association between paternal incarceration and delinquency. This association remains modest but consistent net of controls. Age ($\beta = 0.18$) and mother's binge drinking ($\beta = 0.09$) are positively associated with negative self-feelings. Lower self-control ($\beta = -0.014$) is also associated with negative self-feelings. There is a direct association between father's education ($\beta = -0.029$) and delinquency. The path through negative self-feelings ($\beta = 0.15$) is significant and coefficients are positive in the hypothesized direction. The coefficients presented in the box at the bottom of Figure 3 summarize the direct, indirect, and total effects for the model. The procedures outlined by Bollen (1987) were used to calculate these coefficients. This is evidence that H2 is supported.

Figure 3. Kaplan Mediation Model



The Giordano mediation model is a test of H3, H4, H5 and H6:

H3: Experiencing paternal incarceration is negatively associated with agency, which increases delinquency in adolescence, net of other risk factors.

H4: Experiencing paternal incarceration is negatively associated with identity, which increases delinquency in adolescence, net of other risk factors.

H5: Experiencing paternal incarceration is positively associated with happiness, which decreases delinquency in adolescence, net of other risk factors.

H6: Experiencing paternal incarceration is positively associated with anger, which increases delinquency in adolescence, net of other risk factors.

The coefficient for the association between incarceration and delinquency is now reduced to ($\beta = 0.035$). Including these new mediating variables accounted for 42 percent of the original association between paternal incarceration and delinquency. Of the four variables included in this model, only coefficients for anger and identity are significant. Incarceration is associated with increased anger ($\beta = 0.06$) and decreased identity ($\beta = -0.027$). Both anger ($\beta = 0.13$) and identity ($\beta = 0.09$) are positively associated with delinquency. The negative association between father's education and delinquency ($\beta = -0.029$) remains. Therefore, there is evidence that H4 and H6 are supported but there is not evidence to supported H3 or H5.

Figure 4. Giordano Mediation Model

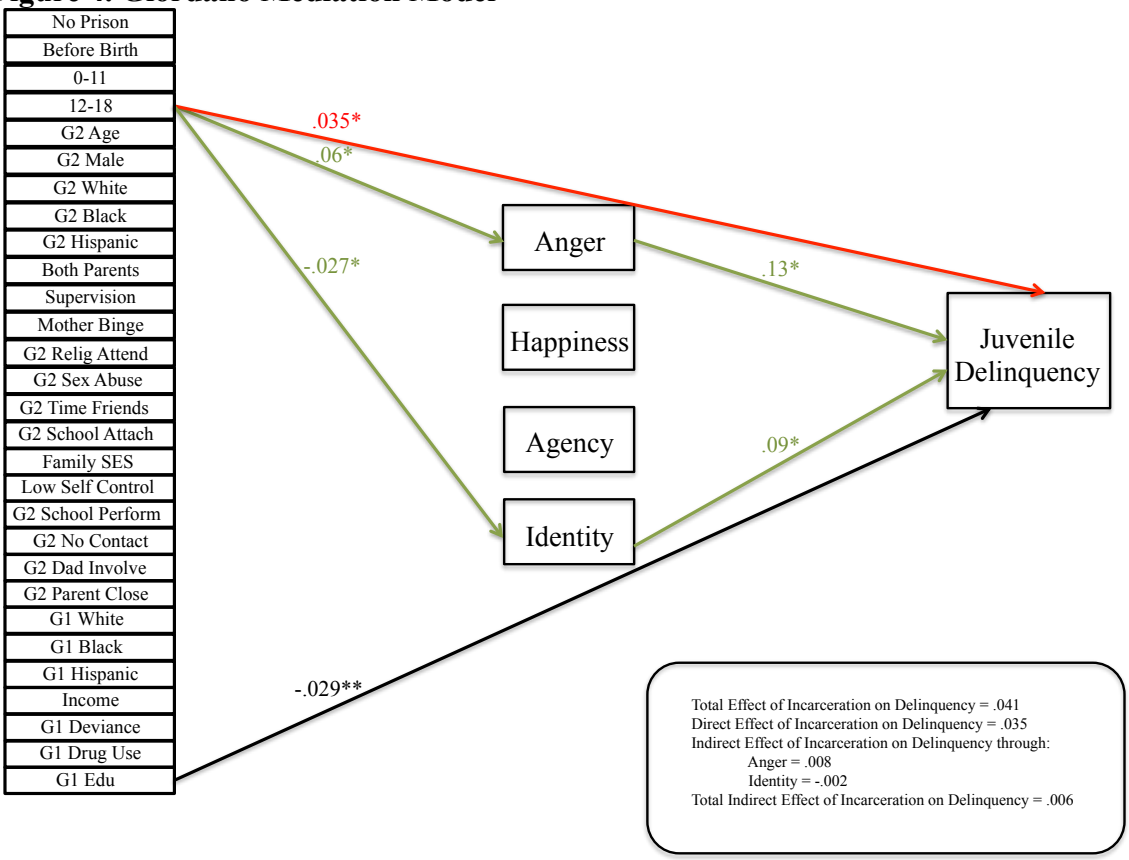
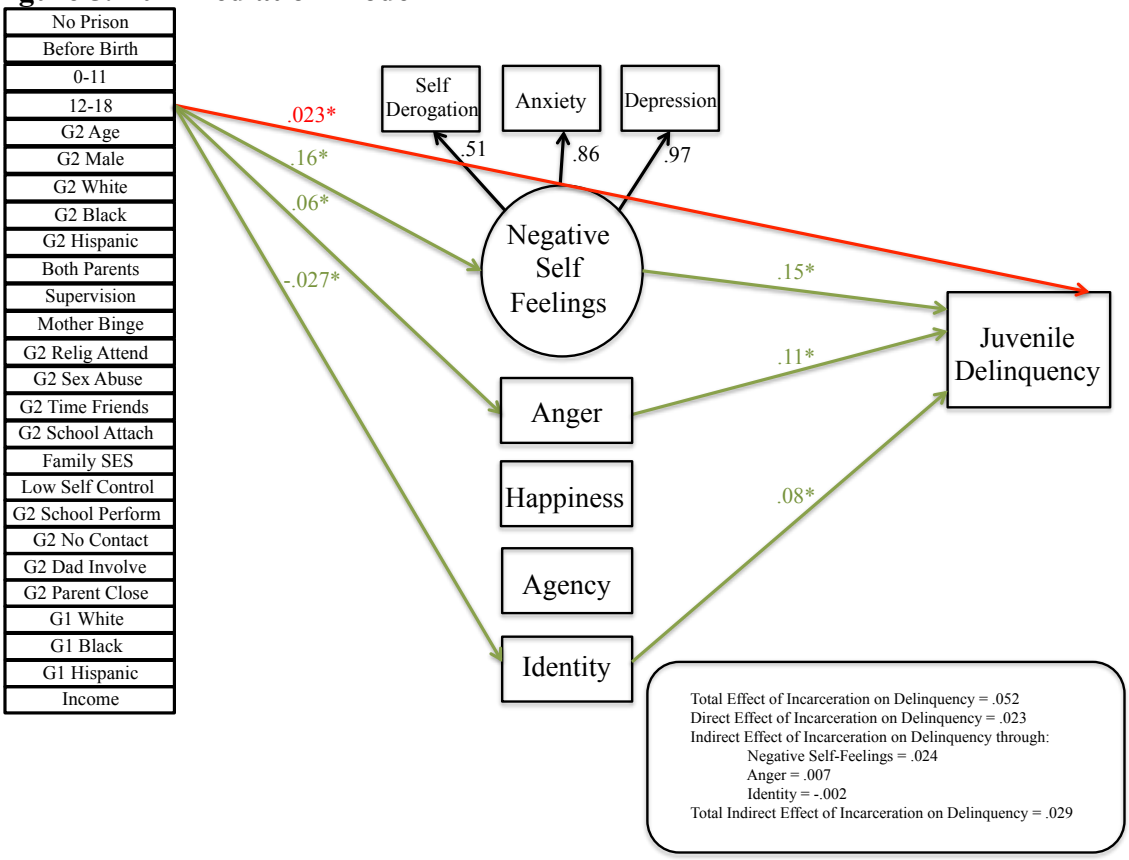


Figure 5 is the full model that includes all mediating paths identified simultaneously. This model further investigates H2-H6.

The direct association between paternal incarceration and delinquency is (β = 0.023). As the model below illustrates, including all mediating variables simultaneously account for a 62 percent reduction in the coefficient between paternal incarceration and delinquency. The only significant mediating pathways remain through negative self-feelings, anger and identity. Incarceration is positively associated with negative self-feelings (β = 0.16) and anger (β = 0.06) but negatively associated with identity (β = -

0.027). Negative self-feelings (β = 0.15), anger (β = 0.11), and identity (β = 0.08) are all associated with delinquency. This provides further evidence that H2, H4, and H6 are supported by the data.

Figure 5. Full Mediation Model



In summary, mediation analyses provide support the central hypothesis examined in this study. The basic association between paternal incarceration and children's delinquency remains significant and in the hypothesized direction in each model. However, the association is only significant for children for children aged 12 and older.

The results indicate partial support for the hypothesized mediating pathways between paternal incarceration and children's delinquency. The association between negative self-feelings, identity, and anger are all statistically significant and in the hypothesized directions. However, the relationship between incarceration and delinquency mediated by agency and happiness were not statistically significant. The implications of these and other findings will be discussed in Chapter VII.

CHAPTER V

SUBGROUP ANALYSIS

Subgroup analyses were conducted to get a more complete examination of the association between paternal incarceration and delinquency. This analysis allows me to test whether the mediating pathways investigated in the previous chapter are contingent on characteristics of the child, namely race and gender.

Mplus implements an option called "grouping" analysis, which allows researchers to estimate interactive effects especially when the conditional variables are nominal (Muthén and Khoo 1998). Researchers can investigate models of interest across multiple groups that are believed to reflect different values of a moderator variable. The analyses are conducted with the particular parameters of interest in the models to be estimated and constrained to be equal alternately. The χ^2 values produced by the models with and without constraint are then compared. If the model without constraint has significantly reduced χ^2 values compared to the model with constraint of equality, it is concluded that a significant interactive effect is observed (Muthén and Muthén 2012). The grouping option is used in this study to estimate whether the influences of mediating variables on delinquent outcomes differ for males and females as well as Whites, Blacks and Hispanics.

Moderation Analysis

Race

To test for racial differences in the measures, a series of models were estimated for Whites, Blacks, and Hispanics. This is a test of H7:

H7: The association of paternal incarceration with delinquency varies by race.

Initially unconstrained models were specified in which all parameters were freely estimated across race. Then, based on the Modification Indices from Mplus, a model was estimated in which all factor loadings were constrained to be equal for Whites, Blacks, and Hispanics. Table 6 presents the coefficients for these tests. Chi-square difference tests were used to compare the fit of each unconstrained model with that of the respective constrained model. Table 7 shows the results of goodness of fit indices and Chi-square tests. Results indicated that the constrained models did not have significantly reduced Chi-square values for any of the models. Consistent with recent studies

(Roettger and Swisher 2011, Wakefield and Wildeman 2011), this is an indication that in this data there is no evidence of an interaction effect with race. Therefore, H7 is not supported and the association between paternal incarceration and delinquency applies equally across racial groups.

Table 6. Standardized Effects by Race

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
No Incarceration → Delinquency	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
No Incarceration → Negative Self-Feelings		0.05		0.03		0.06		0.06		0.06		0.08
No Incarceration → Agency			0.01	0.01			0.03	0.02			0.05	0.02
No Incarceration → Identity			0.001	0.00			0.001	0.00			0.003	0.00
No Incarceration → Anger			-0.01	-0.01			-0.02	-0.02			-0.01	-0.01
No Incarceration → Happiness			0.03	0.03			0.06	0.04			0.08	0.06
Incarceration Before Birth → Delinquency	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Incarceration Before Birth → Negative Self-Feelings		0.50		0.47		0.50		0.47		0.50		0.47
Incarceration Before Birth → Agency			-0.01	0.00			-0.01	0.00			-0.01	0.00
Incarceration Before Birth → Identity			0.02	0.02			0.02	0.02			0.02	0.02
Incarceration Before Birth → Anger			-0.02	-0.02			-0.02	-0.02			-0.02	-0.02
Incarceration Before Birth → Happiness			0.10	0.10			0.10	0.10			0.10	0.10

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Incarceration Before Age 12 → Delinquency	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.01
Incarceration Before Age 12 → Negative Self-Feelings		0.03		0.03		0.03		0.03		0.03		0.03
Incarceration Before Age 12 → Agency			0.17	0.19			0.17	0.19			0.17	0.19
Incarceration Before Age 12 → Identity			0.03	0.03			0.03	0.03			0.03	0.03
Incarceration Before Age 12 → Anger			0.01	0.01			0.01	0.01			0.01	0.01
Incarceration Before Age 12 → Happiness			-0.07	-0.05			-0.07	-0.05			-0.07	-0.05
Incarceration Between Ages 12-18 → Delinquency	0.05*	0.043*	0.034*	0.023*	0.06*	0.041*	0.037*	0.023*	0.06*	0.047*	0.037*	0.023*
Incarceration Between Ages 12-18 → Negative Self-Feelings		0.16*		0.16*		0.15*		0.16*		0.19*		0.16*
Incarceration Between Ages 12-18 → Agency			0.11	0.11			0.13	0.11			0.14	0.11
Incarceration Between Ages 12-18 → Identity			-.025*	-.027*			-.027*	-.027*			-.029*	-.027*
Incarceration Between Ages 12-18 → Anger			0.03*	0.06*			0.05*	0.06*			0.08*	0.06*
Incarceration Between Ages 12-18 → Happiness			-0.03**	-0.01			-0.01**	-0.01			-0.05**	-0.01

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Negative Self-Feelings → Delinquency		0.15*		0.15*		0.15*		0.15*		0.15*		0.15*
Agency → Delinquency			0.26	0.08			0.26	0.08			0.26	0.08
Identity → Delinquency			0.09*	0.03			0.09*	0.03			0.09*	0.03
Anger → Delinquency			0.13*	0.12*			0.13*	0.12*			0.13*	0.12*
Happiness → Delinquency			0.05	0.07			0.05	0.07			0.05	0.07
Child Age → Delinquency	0.03*	0.00	0.00	0.00	0.04**	0.00	0.00	0.00	0.04**	0.00	0.00	0.00
Child Age → Negative Self-Feelings		-0.003		0.00		-0.003		0.00		-0.003		0.00
Child Age → Agency			0.00	0.00			0.00	0.00			0.00	0.00
Child Age → Identity			0.01	0.00			0.01	0.00			0.01	0.00
Child Age → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Child Age → Happiness			0.04**	0.00			0.04**	0.00			0.04**	0.00

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Male → Delinquency	0.01*	0.01	0.01	0.00	0.02*	0.01	0.01	0.00	0.02*	0.01	0.01	0.00
Child Male → Negative Self-Feelings		-0.31		-0.25		-0.31		-0.25		-0.31		-0.25
Child Male → Agency			-0.01	-0.01			-0.01	-0.01			-0.01	-0.01
Child Male → Identity			0.02*	0.01			0.02*	0.01			0.02*	0.01
Child Male → Anger			-0.01	0.00			-0.01	0.00			-0.01	0.00
Child Male → Happiness			0.03*	0.03			0.03*	0.03			0.03*	0.03
Child Religious Attendance → Delinquency	-0.001	0.00	0.00	0.00	-0.001	0.00	0.00	0.00	-0.001	0.00	0.00	0.00
Child Religious Attendance → Negative Self-Feelings		-0.01		0.00		-0.01		0.00		-0.01		0.00
Child Religious Attendance → Agency			0.002	0.00			0.002	0.00			0.002	0.00
Child Religious Attendance → Identity			0.00	0.00			0.00	0.00			0.00	0.00
Child Religious Attendance → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Child Religious Attendance → Happiness			0.00	0.00			0.00	0.00			0.00	0.00

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Sexual Abuse → Delinquency	-0.01	0.00	0.01	0.00	-0.02	0.00	0.01	0.00	-0.02	0.00	0.01	0.00
Child Sexual Abuse → Negative Self-Feelings		-0.12				-0.12				-0.12		
Child Sexual Abuse → Agency			0.02	0.02			0.02	0.02			0.02	0.02
Child Sexual Abuse → Identity			0.05	0.06			0.05	0.06			0.05	0.06
Child Sexual Abuse → Anger			0.12	0.09			0.12	0.09			0.12	0.09
Child Sexual Abuse → Happiness			0.20	0.19			0.20	0.19			0.20	0.19
Child School Performance → Delinquency	-.04**	-0.14*	-0.05	-0.03	-.06**	-0.14*	-0.06	-0.03	-.06**	-0.14*	-0.06	-0.03
Child School Performance → Negative Self-Feelings		-0.05		-0.03		-0.05		-0.03		-0.05		-0.03
Child School Performance → Agency			0.11**	0.12			0.12**	0.12			0.14**	0.12
Child School Performance → Identity			0.12**	0.14			0.12**	0.14			0.13**	0.14
Child School Performance → Anger			-0.07	0.09			-0.07	0.09			-0.06	0.09
Child School Performance → Happiness			0.12	0.11			0.11	0.11			0.11	0.11

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child School Attachment → Delinquency	-0.005**	0.00	0.00	0.00	-0.007**	0.00	0.00	0.00	-0.007**	0.00	0.00	0.00
Child School Attachment → Negative Self-Feelings		-0.05*		-0.03		-0.05*		-0.03		-0.05*		-0.03
Child School Attachment → Agency			0.01**	0.00			0.01**	0.00			0.01**	0.00
Child School Attachment → Identity			0.012**	0.00			0.012**	0.00			0.012**	0.00
Child School Attachment → Anger			-0.03**	0.00			-0.03**	0.00			-0.03**	0.00
Child School Attachment → Happiness			0.00	0.00			0.00	0.00			0.00	0.00
Time with Friends → Delinquency	0.01*	0.00	0.00	0.00	0.02*	0.00	0.00	0.00	0.02*	0.00	0.00	0.00
Time with Friends → Negative Self-Feelings		0.01		0.00		0.01		0.00		0.01		0.00
Time with Friends → Agency			-0.11	0.00			-0.11	0.00			-0.11	0.00
Time with Friends → Identity			-0.02	0.00			-0.02	0.00			-0.02	0.00
Time with Friends → Anger			0.02	0.00			0.02	0.00			0.02	0.00
Time with Friends → Happiness			-0.02	0.00			-0.02	0.00			-0.02	0.00

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Low Self Control → Delinquency	0.004*	0.00	0.00	0.00	0.005**	0.00	0.00	0.00	0.005**	0.00	0.00	0.00
Child Low Self Control → Negative Self-Feelings		0.01**		0.01		0.01**		0.01		0.01**		0.01
Child Low Self Control → Agency			-0.06**	-0.03			-0.06**	-0.03			-0.06**	-0.03
Child Low Self Control → Identity			-0.03**	-0.05			-0.03**	-0.05			-0.03**	-0.05
Child Low Self Control → Anger			0.08**	0.03			0.08**	0.03			0.08**	0.03
Child Low Self Control → Happiness			0.03*	0.01			0.03*	0.01			0.03*	0.01
Family SES → Delinquency	0.001	0.00	0.00	0.00	0.001	0.00	0.00	0.00	0.001	0.00	0.00	0.00
Family SES → Negative Self-Feelings		-0.20		-0.17		-0.20		-0.17		-0.20		-0.17
Family SES → Agency			0.01	0.00			0.01	0.00			0.01	0.00
Family SES → Identity			0.01	0.00			0.01	0.00			0.01	0.00
Family SES→ Anger			0.00	0.00			0.00	0.00			0.00	0.00
Family SES → Happiness			-0.02	0.00			-0.02	0.00			-0.02	0.00

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Mother's Binge Drinking → Delinquency	0.01*	0.09*	0.01	0.01	0.02*	0.09*	0.01	0.01	0.02*	0.09*	0.01	0.01
Mother's Binge Drinking → Negative Self-Feelings		0.06		0.03		0.06		0.03		0.06		0.03
Mother's Binge Drinking → Agency			-0.04	0.00			-0.04	0.00			-0.04	0.00
Mother's Binge Drinking → Identity			-0.01	0.00			-0.01	0.00			-0.01	0.00
Mother's Binge Drinking → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Mother's Binge Drinking → Happiness			0.00	0.00			0.00	0.00			0.00	0.00
Both Parents → Delinquency	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00
Both Parents → Negative Self-Feelings		-0.08		0/03		-0.08		0/03		-0.08		0/03
Both Parents → Agency			-0.03	0.01			-0.03	0.01			-0.01	0.01
Both Parents → Identity			0.02	0.03			0.02	0.03			0.01	0.03
Both Parents → Anger			0.07	0.05			0.05	0.05			0.08	0.05
Both Parents → Happiness			-0.29*	-0.23			-0.27*	-0.23			-0.31*	-0.23

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
No Contact → Delinquency	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
No Contact → Negative Self-Feelings		0.03		0.00		0.03		0.00		0.03		0.00
No Contact → Agency			-0.004	0.00			-0.004	0.00			-0.004	0.00
No Contact → Identity			-0.01	0.00			-0.01	0.00			-0.01	0.00
No Contact → Anger			-0.03	-0.01			-0.03	-0.01			-0.03	-0.01
No Contact → Happiness			-0.02	-0.01			-0.02	-0.01			-0.02	-0.01
Parent Closeness → Delinquency	-.02**	0.00	0.00	0.00	-.02**	0.00	0.00	0.00	-.02**	0.00	0.00	0.00
Parent Closeness → Negative Self-Feelings		-0.13		0.03		-0.13		0.03		-0.13		0.03
Parent Closeness → Agency			0.08**	0.06			0.08**	0.06			0.06**	0.06
Parent Closeness → Identity			0.20**	0.22			0.21**	0.22			0.19**	0.22
Parent Closeness → Anger			-0.05**	-0.03			-0.08**	-0.03			-0.03**	-0.03
Parent Closeness → Happiness			0.06	-.01			0.06	-.01			0.05	-.01

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Parent Supervision → Delinquency	-0.003*	0.00	0.00	0.00	-0.003*	0.00	0.00	0.00	-0.003*	0.00	0.00	0.00
Parent Supervision → Negative Self-Feelings		0.01		0.00		0.01		0.00		0.01		0.00
Parent Supervision → Agency			-0.01	0.01			-0.01	0.01			-0.01	0.01
Parent Supervision → Identity			0.00	0.00			0.00	0.00			0.00	0.00
Parent Supervision → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Parent Supervision → Happiness			0.00	0.00			0.00	0.00			0.00	0.00
Father White → Delinquency	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Father White → Negative Self-Feelings		0.01		0.02		0.01		0.02		0.01		0.02
Father White → Agency			0.00	0.01			0.00	0.01			0.00	0.01
Father White → Identity			0.00	0.00			0.00	0.00			0.00	0.00
Father White → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Father White → Happiness			0.00	0.00			0.00	0.00			0.00	0.00

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Black → Delinquency	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00
Father Black → Negative Self-Feelings		0.23		0.03		0.21		0.03		0.23		0.03
Father Black → Agency			-0.002	0.00			-0.002	0.00			-0.002	0.00
Father Black → Identity			0.09	0.03			0.09	0.03			0.09	0.03
Father Black → Anger			-0.01	0.00			-0.01	0.00			-0.01	0.00
Father Black → Happiness			0.08	0.03			0.08	0.03			0.08	0.03
Father Hispanic → Delinquency	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
Father Hispanic → Negative Self-Feelings		0.01		0.01		0.01		0.01		0.01		0.01
Father Hispanic → Agency			-0.05	0.00			-0.05	0.00			-0.05	0.00
Father Hispanic → Identity			0.00	0.00			0.00	0.00			0.00	0.00
Father Hispanic → Anger			-0.23	-0.13			-0.23	-0.13			-0.23	-0.13
Father Hispanic → Happiness			-0.11	-0.07			-0.11	-0.07			-0.11	-0.07

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Family Income → Delinquency	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family Income → Negative Self-Feelings		0.00		0.00		0.00		0.00		0.00		0.00
Family Income → Agency			0.00	0.00			0.00	0.00			0.00	0.00
Family Income → Identity			0.00	0.00			0.00	0.00			0.00	0.00
Family Income → Anger			0.00	0.00			0.00	0.00			0.00	0.00
Family Income → Happiness			0.00	0.00			0.00	0.00			0.00	0.00
Father Involvement → Delinquency	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
Father Involvement → Negative Self-Feelings		-0.06		-0.03		-0.06		-0.03		-0.06		-0.03
Father Involvement → Agency			0.05	0.00			0.05	0.00			0.05	0.00
Father Involvement → Identity			0.04*	0.22			0.31**	0.22			0.36**	0.22
Father Involvement → Anger			-0.07	-0.06			-0.07	-0.06			-0.07	-0.06
Father Involvement → Happiness			0.18	0.13			0.18	0.13			0.18	0.13

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Prior Deviance → Delinquency	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00
Father Prior Deviance → Negative Self-Feelings		0.06		0.03		0.06		0.03		0.06		0.03
Father Prior Deviance → Agency			0.11	0.14			0.11	0.14			0.11	0.14
Father Prior Deviance → Identity			0.06	0.07			0.06	0.08			0.03	0.08
Father Prior Deviance → Anger			-0.11	-0.07			-0.11	-0.07			-0.11	-0.07
Father Prior Deviance → Happiness			-0.06	-0.05			-0.05	-0.05			-0.06	-0.05
Father Drug Use → Delinquency	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02
Father Drug Use → Negative Self-Feelings		0.07		0.04		0.07		0.04		0.07		0.04
Father Drug Use → Agency			-0.11	-0.13			-0.11	-0.13			-0.11	-0.13
Father Drug Use → Identity			-0.09	-0.05			-0.09	-0.05			-0.09	-0.05
Father Drug Use → Anger			0.12*	0.09			0.12*	0.09			0.12*	0.09
Father Drug Use → Happiness			-0.09	-0.06			-0.09	-0.06			-0.09	-0.06

*p < .05 **p < .01

Table 6. (continued)

	White				Black				Hispanic			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Education → Delinquency	0.00	-.027**	-.028**	0.12	0.00	-.023**	-.025**	0.12	0.00	-.026**	-.025**	
Father Education → Negative Self-Feelings		0.00		0.00		0.00		0.00		0.00		
Father Education → Agency			-0.01	0.00			-0.01	0.00			-0.01	
Father Education → Identity			0.00	0.00			0.00	0.00			0.00	
Father Education → Anger			-0.01*	0.00			-0.01*	0.00			-0.01*	
Father Education → Happiness			-0.01	0.00			-0.01	0.00			-0.01	

*p < .05 **p < .01

Table 7. Goodness of Fit Indices and Chi-Square Difference by Race

Models	CFI/TFI	RMSEA	Chi Square (df)
White			
Baseline	0.79/0.75	0.06	387.01 (58)
Kaplan	0.72/0.74	0.07	411.99 (69)
Giordano	0.77/0.71	0.08	698.03 (87)
All	0.76/0.74	0.07	985.02 (161)
Black			
Baseline	0.80/0.78	0.07	385.07 (58)
Kaplan	0.70/0.73	0.06	402.23 (69)
Giordano	0.77/0.73	0.09	697.15 (87)
All	0.76/0.75	0.08	983.15 (161)
Hispanic			
Baseline	0.77/0.78	0.06	386.09 (58)
Kaplan	0.69/0.71	0.07	397.27 (69)
Giordano	0.75/0.70	0.08	699.45 (87)
All	0.71/0.73	0.08	985.17 (161)

Gender

To test for racial differences in the measures, a series of models were estimated for males and females separately. This is a test of H8:

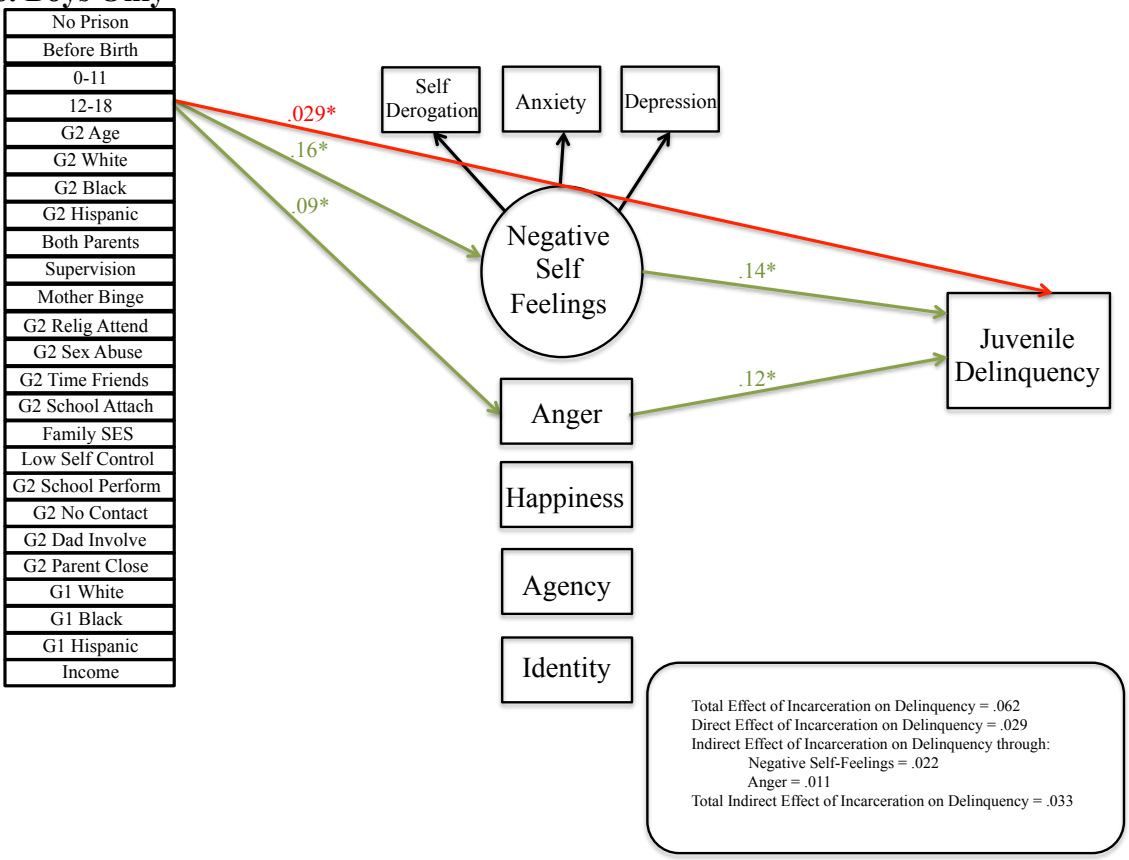
H8: The association of paternal incarceration with delinquency varies by gender.

Initially unconstrained models were specified in which all parameters were freely estimated across gender. Then, a model was estimated in which all factor loadings were constrained to be equal for males and females. Table 8 provides the coefficients for these tests.

Chi-square difference tests were used to compare the fit of each unconstrained model with that of the respective constrained model. Table 9 presents the model fit indices and Chi-square results. The results indicated that the constrained models did have significantly reduced Chi-square values. This is an indication that H8 is supported. In other words, there is evidence of interactive effect of gender on the association between paternal incarceration and delinquency.

Based on these findings, I conducted subsequent analyses separately for males and females. For males, the partial mediation model (Figure 6) provides the best fit for the data on delinquency. It may be observed that there is a chi-square difference of 85.89 ($p < .05$) between models shown in Figures 6 and 5 for males. The direct association between incarceration and delinquency ($\beta = 0.029$) is significant. Contrary to the full mediation model (Figure 5), the relationships between paternal incarceration and delinquency are not fully mediated by all of the social psychological mediators. The pathway through negative self-feelings ($\beta = 0.16$) remains significant, as does the pathway through anger ($\beta = 0.09$). Negative self-feelings ($\beta = 0.13$) and anger ($\beta = 0.08$) are both positively associated with delinquency.

Figure 6. Boys Only



For females, the partial mediation model (Figure 7) provides the best fit for the data on delinquency. It may be observed that there is a chi-square difference of 84.45 ($p < .05$) between models shown in Figures 7 and 5 for females. The direct association between incarceration and delinquency ($\beta = 0.027$) is significant. In examining the findings for females that the relationship between paternal incarceration and delinquency are significantly related to negative self-feelings and identity. Paternal incarceration is positively associated with negative self-feelings ($\beta = 0.14$) but negatively associated

with identity (β = -0.025). Both negative self-feelings (β = 0.13) and identity (β = 0.08) are positively associated with delinquency.

Figure 7. Girls Only

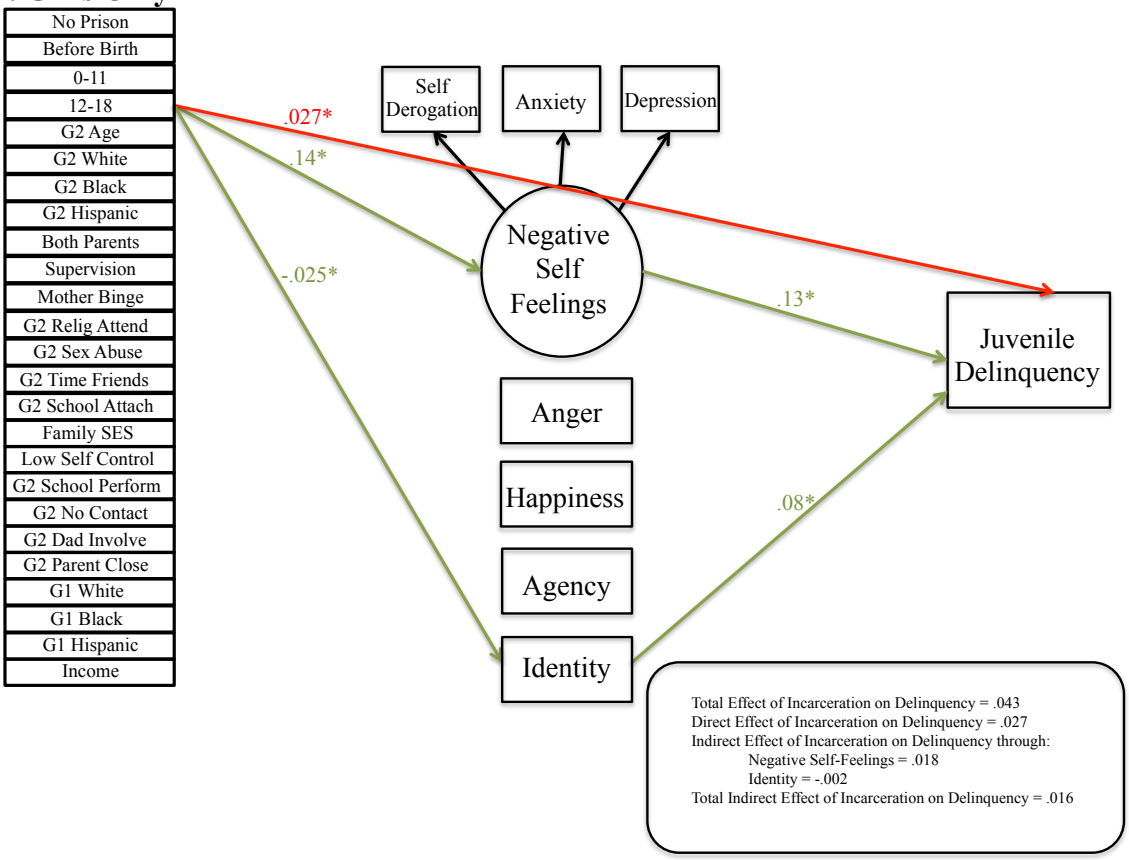


Table 8. Standardized Effects by Gender

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
No Incarceration → Delinquency	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01
No Incarceration → Negative Self-Feelings		0.07		0.07		0.07		0.07
No Incarceration → Agency			0.04	0.03			0.04	0.03
No Incarceration → Identity			0.001	0.00			0.000	0.00
No Incarceration → Anger			-0.03	-0.03			-0.03	-0.03
No Incarceration → Happiness			0.07	0.05			0.07	0.05
Incarceration Before Birth → Delinquency	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Incarceration Before Birth → Negative Self-Feelings		0.50		0.47		0.50		0.47
Incarceration Before Birth → Agency			-0.01	0.00			-0.01	0.00
Incarceration Before Birth → Identity			0.03	0.02			0.02	0.02
Incarceration Before Birth → Anger			-0.02	-0.02			-0.02	-0.02
Incarceration Before Birth → Happiness			0.10	0.10			0.10	0.10

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Incarceration Before Age 12 → Delinquency	0.02	0.02	0.02	0.01	0.02	0.02	0.02	0.01
Incarceration Before Age 12 → Negative Self-Feelings		0.03		0.03		0.03		0.03
Incarceration Before Age 12 → Agency			0.19	0.19			0.17	0.19
Incarceration Before Age 12 → Identity			0.03	0.03			0.03	0.03
Incarceration Before Age 12 → Anger			0.01	0.01			0.01	0.01
Incarceration Before Age 12 → Happiness			-0.07	-0.05			-0.07	-0.05
Incarceration Between Ages 12-18 → Delinquency	0.06*	0.047*	0.036*	0.029*	0.06*	0.046*	0.035*	0.027*
Incarceration Between Ages 12-18 → Negative Self-Feelings		0.19*		0.16*		0.18*		0.14*
Incarceration Between Ages 12-18 → Agency			0.12	0.11			0.12	0.11
Incarceration Between Ages 12-18 → Identity			-.027*	-.027*			-.027*	-.025*
Incarceration Between Ages 12-18 → Anger			0.06*	0.09*			0.06*	0.06*
Incarceration Between Ages 12-18 → Happiness			-0.04**	-0.01			-0.04**	-0.01

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Negative Self-Feelings → Delinquency		0.15*		0.14*		0.15*		0.13*
Agency → Delinquency			0.26	0.08			0.26	0.08
Identity → Delinquency			0.09*	0.03			0.09*	0.08*
Anger → Delinquency			0.13*	0.12*			0.13*	0.12*
Happiness → Delinquency			0.05	0.07			0.05	0.07
Child White → Delinquency	0.04	0.03	0.03	0.03	0.04	0.03	0.03	0.03
Child White → Negative Self-Feelings		0.03		0.01		0.03		0.01
Child White → Agency			0.04	0.04			0.04	0.04
Child White → Identity			0.10	0.11			0.10	0.11
Child White → Anger			0.00	0.00			0.00	0.00
Child White → Happiness			0.00	0.00			0.00	0.00

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Black → Delinquency	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Child Black → Negative Self-		-0.30		0.00		-0.30		0.00
Child Black → Agency			-0.002	-0.001			-0.002	-0.001
Child Black → Identity			-0.10	-0.13			-0.10	-0.13
Child Black → Anger			0.05	0.05			0.05	0.05
Child Black → Happiness			0.03	0.02			0.03	0.02
Child Hispanic → Delinquency	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Child Hispanic → Negative Self-		-0.004		0.00		-0.004		0.00
Child Hispanic → Agency			-0.06	-0.03			-0.06	-0.03
Child Hispanic → Identity			-0.001	-0.001			-0.001	-0.001
Child Hispanic → Anger			0.04	0.05			0.04	0.05
Child Hispanic → Happiness			0.11	0.10			0.11	0.10

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Age → Delinquency	0.04**	0.00	0.00	0.00	0.04**	0.00	0.00	0.00
Child Age → Negative Self-Feelings		-0.003		0.00		-0.003		0.00
Child Age → Agency			0.00	0.00			0.00	0.00
Child Age → Identity			0.01	0.00			0.01	0.00
Child Age → Anger			0.00	0.00			0.00	0.00
Child Age → Happiness			0.04**	0.00			0.04**	0.00
Child Religious Attendance → Delinquency	-0.001	0.00	0.00	0.00	-0.001	0.00	0.00	0.00
Child Religious Attendance → Negative Self-Feelings		-0.01		0.00		-0.01		0.00
Child Religious Attendance → Agency			0.002	0.00			0.002	0.00
Child Religious Attendance → Identity			0.00	0.00			0.00	0.00
Child Religious Attendance → Anger			0.00	0.00			0.00	0.00
Child Religious Attendance → Happiness			0.00	0.00			0.00	0.00

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Sexual Abuse → Delinquency	-0.02	0.00	0.01	0.00	-0.02	0.00	0.01	0.00
Child Sexual Abuse → Negative Self-Feelings		-0.14				-0.12		
Child Sexual Abuse → Agency			0.02	0.02			0.02	0.02
Child Sexual Abuse → Identity			0.05	0.06			0.05	0.06
Child Sexual Abuse → Anger			0.12	0.09			0.12	0.09
Child Sexual Abuse → Happiness			0.20	0.19			0.20	0.19
Child School Performance → Delinquency	-.06**	-0.16*	-0.05	-0.03	-.06**	-0.14*	-0.06	-0.03
Child School Performance → Negative Self-Feelings		-0.05		-0.03		-0.05		-0.03
Child School Performance → Agency			0.13**	0.12			0.12**	0.12
Child School Performance → Identity			0.13**	0.14			0.12**	0.14
Child School Performance → Anger			-0.05	0.09			-0.07	0.09
Child School Performance → Happiness			0.14	0.11			0.11	0.11

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child School Attachment → Delinquency	-0.005**	0.00	0.00	0.00	-0.007**	0.00	0.00	0.00
Child School Attachment → Negative Self-Feelings		-0.05*		-0.03		-0.05*		-0.03
Child School Attachment → Agency			0.01**	0.00			0.01**	0.00
Child School Attachment → Identity			0.012**	0.00			0.012**	0.00
Child School Attachment → Anger			-0.03**	0.00			-0.03**	0.00
Child School Attachment → Happiness			0.00	0.00			0.00	0.00
Time with Friends → Delinquency	0.01*	0.00	0.00	0.00	0.02*	0.00	0.00	0.00
Time with Friends → Negative Self-Feelings		0.01		0.00		0.01		0.00
Time with Friends → Agency			-0.11	0.00			-0.11	0.00
Time with Friends → Identity			-0.02	0.00			-0.02	0.00
Time with Friends → Anger			0.02	0.00			0.02	0.00
Time with Friends → Happiness			-0.02	0.00			-0.02	0.00

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Child Low Self Control → Delinquency	0.004*	0.00	0.00	0.00	0.005**	0.00	0.00	0.00
Child Low Self Control → Negative Self-Feelings		0.01**		0.01		0.01**		0.01
Child Low Self Control → Agency			-0.06**	-0.03			-0.06**	-0.03
Child Low Self Control → Identity			-0.03**	-0.05			-0.03**	-0.05
Child Low Self Control → Anger			0.08**	0.03			0.08**	0.03
Child Low Self Control → Happiness			0.03*	0.01			0.03*	0.01
Family SES → Delinquency	0.001	0.00	0.00	0.00	0.001	0.00	0.00	0.00
Family SES → Negative Self-Feelings		-0.20		-0.17		-0.20		-0.17
Family SES → Agency			0.01	0.00			0.01	0.00
Family SES → Identity			0.01	0.00			0.01	0.00
Family SES→ Anger			0.00	0.00			0.00	0.00
Family SES → Happiness			-0.02	0.00			-0.02	0.00

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Mother's Binge Drinking → Delinquency	0.01*	0.09*	0.01	0.01	0.02*	0.09*	0.01	0.01
Mother's Binge Drinking → Negative Self-Feelings		0.06		0.03		0.06		0.03
Mother's Binge Drinking → Agency			-0.04	0.00			-0.04	0.00
Mother's Binge Drinking → Identity			-0.01	0.00			-0.01	0.00
Mother's Binge Drinking → Anger			0.00	0.00			0.00	0.00
Mother's Binge Drinking → Happiness			0.00	0.00			0.00	0.00
Both Parents → Delinquency	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00
Both Parents → Negative Self-Feelings		-0.08		0/03		-0.08		0/03
Both Parents → Agency			-0.03	0.01			-0.03	0.01
Both Parents → Identity			0.02	0.03			0.02	0.03
Both Parents → Anger			0.07	0.05			0.05	0.05
Both Parents → Happiness			-0.29*	-0.23			-0.27*	-0.23

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
No Contact → Delinquency	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
No Contact → Negative Self-Feelings		0.03		0.00		0.03		0.00
No Contact → Agency			-0.004	0.00			-0.004	0.00
No Contact → Identity			-0.01	0.00			-0.01	0.00
No Contact → Anger			-0.03	-0.01			-0.03	-0.01
No Contact → Happiness			-0.02	-0.01			-0.02	-0.01
Parent Closeness → Delinquency	-.02**	0.00	0.00	0.00	-.02**	0.00	0.00	0.00
Parent Closeness → Negative Self-Feelings		-0.13		0.03		-0.13		0.03
Parent Closeness → Agency			0.08**	0.06			0.08**	0.06
Parent Closeness → Identity			0.20**	0.22			0.21**	0.22
Parent Closeness → Anger			-0.05**	-0.03			-0.08**	-0.03
Parent Closeness → Happiness			0.06	-.01			0.06	-.01

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Parent Supervision → Delinquency	-0.003*	0.00	0.00	0.00	-0.003*	0.00	0.00	0.00
Parent Supervision → Negative Self-Feelings		0.01		0.00		0.01		0.00
Parent Supervision → Agency			-0.01	0.01			-0.01	0.01
Parent Supervision → Identity			0.00	0.00			0.00	0.00
Parent Supervision → Anger			0.00	0.00			0.00	0.00
Parent Supervision → Happiness			0.00	0.00			0.00	0.00
Father White → Delinquency	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Father White → Negative Self-Feelings		0.01		0.02		0.01		0.02
Father White → Agency			0.00	0.01			0.00	0.01
Father White → Identity			0.00	0.00			0.00	0.00
Father White → Anger			0.00	0.00			0.00	0.00
Father White → Happiness			0.00	0.00			0.00	0.00

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Black → Delinquency	-0.02	0.00	0.00	0.00	-0.02	0.00	0.00	0.00
Father Black → Negative Self-Feelings		0.23		0.03		0.21		0.03
Father Black → Agency			-0.002	0.00			-0.002	0.00
Father Black → Identity			0.09	0.03			0.09	0.03
Father Black → Anger			-0.01	0.00			-0.01	0.00
Father Black → Happiness			0.08	0.03			0.08	0.03
Father Hispanic → Delinquency	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.00
Father Hispanic → Negative Self-Feelings		0.01		0.01		0.01		0.01
Father Hispanic → Agency			-0.05	0.00			-0.05	0.00
Father Hispanic → Identity			0.00	0.00			0.00	0.00
Father Hispanic → Anger			-0.23	-0.13			-0.23	-0.13
Father Hispanic → Happiness			-0.11	-0.07			-0.11	-0.07

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Family Income → Delinquency	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Family Income → Negative Self-Feelings		0.00		0.00		0.00		0.00
Family Income → Agency			0.00	0.00			0.00	0.00
Family Income → Identity			0.00	0.00			0.00	0.00
Family Income → Anger			0.00	0.00			0.00	0.00
Family Income → Happiness			0.00	0.00			0.00	0.00
Father Involvement → Delinquency	-0.01	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
Father Involvement → Negative Self-Feelings		-0.06		-0.03		-0.06		-0.03
Father Involvement → Agency			0.05	0.00			0.05	0.00
Father Involvement → Identity			0.04*	0.22			0.31**	0.22
Father Involvement → Anger			-0.07	-0.06			-0.07	-0.06
Father Involvement → Happiness			0.18	0.13			0.18	0.13

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Prior Deviance → Delinquency	0.01	0.01	0.01	0.00	0.01	0.01	0.01	0.00
Father Prior Deviance → Negative Self-Feelings		0.06		0.03		0.06		0.03
Father Prior Deviance → Agency			0.11	0.14			0.11	0.14
Father Prior Deviance → Identity			0.06	0.07			0.06	0.08
Father Prior Deviance → Anger			-0.11	-0.07			-0.11	-0.07
Father Prior Deviance → Happiness			-0.06	-0.05			-0.05	-0.05
Father Drug Use → Delinquency	0.03	0.02	0.02	0.02	0.03	0.02	0.02	0.02
Father Drug Use → Negative Self-Feelings		0.07		0.04		0.07		0.04
Father Drug Use → Agency			-0.11	-0.13			-0.11	-0.13
Father Drug Use → Identity			-0.09	-0.05			-0.09	-0.05
Father Drug Use → Anger			0.12*	0.09			0.12*	0.09
Father Drug Use → Happiness			-0.09	-0.06			-0.09	-0.06

*p < .05 **p < .01

Table 8. (continued)

	Males				Females			
	I	II	III	IV	I	II	III	IV
Independent → Dependent	Baseline	Kaplan	Giordano	All	Baseline	Kaplan	Giordano	All
Father Education → Delinquency	0.00	-.027**	-.028**	0.12	0.00	-.023**	-.025**	0.12
Father Education → Negative Self-Feelings		0.00		0.00		0.00		0.00
Father Education → Agency			-0.01	0.00			-0.01	0.00
Father Education → Identity			0.00	0.00			0.00	0.00
Father Education → Anger			-0.01*	0.00			-0.01*	0.00
Father Education → Happiness			-0.01	0.00			-0.01	0.00

*p < .05 **p < .01

Table 9. Goodness of Fit Indices and Chi-Square Difference by Gender

Models	CFI/TFI	RMSEA	Chi Square (df)
Males			
Baseline	0.84/0.89	0.12	413.19 (53)**
Kaplan	0.86/0.84	0.11	414.55 (60)**
Giordano	0.87/0.84	0.10	724.36 (93)**
All	0.90/0.91	0.02	1055.53 (175)*
Females			
Baseline	0.86/0.87	0.11	411.67 (53)**
Kaplan	0.88/0.90	0.07	413.67 (60)**
Giordano	0.87/0.88	0.10	721.34 (93)**
All	0.91/0.91	0.06	1054.09 (175)*

*p < .05 **p < .01

To summarize, models analyzing the moderating effect of race did not yield the hypothesized results. The Chi-square difference tests indicated that the models apply equally to children of different races. Models analyzing the moderating effect of gender did yield results in support of the hypothesized relationship. The Chi-square difference tests demonstrated support for an interactive effect of gender. Specifically it was demonstrated that negative self-feelings mediates the association between paternal incarceration and delinquency for both boys and girls. However, anger is only a significant mechanism for boys and identity is only a significant mechanism for girls. The implications of these and other substantive findings are discussed in the next chapter.

CHAPTER VI

DISCUSSION AND CONCLUSION

Summary of Results and Future Research Plans

The main goal of this dissertation was to determine if an association exists between paternal incarceration and their children's delinquency. A secondary goal was to determine whether parental incarceration leads to deleterious outcomes for their children. The final goal was to investigate the potential mechanisms by which paternal incarceration influences their children's delinquent outcomes.

With respect to the first goal, the analysis supports the claim that children's delinquency is associated experiencing paternal incarceration, net of other relevant factors that precede both delinquency and paternal incarceration. With respect to the second goal, children who experienced paternal incarceration are worse off than similarly situated peers who did not experience paternal incarceration. And finally, the analyses suggest that paternal incarceration is associated with children's delinquency through a variety of mechanisms including negative self-feelings, identity, and anger. Also noteworthy, the results indicate evidence that some of these mechanisms are generic across gender and some are gender specific (Hagan and Foster 2003; Foster 2012). Though none of this work with observational data can approximate a controlled experiment, the results are remarkably consistent across models. In every model paternal incarceration was associated with increasing delinquency. Though none of this work with observational data can approximate a controlled experiment, the results are

remarkably consistent across models. In every model paternal incarceration was associated with increasing delinquency.

A growing number of large-scale, quantitative studies are focusing on the effects of parental incarceration. Prior qualitative studies have been invaluable for developing the concepts necessary to test the most likely mechanisms responsible for deleterious effects. Still, very few studies have overcome the significant methodological difficulty of selection bias. Many of the datasets used are unable to disaggregate the effects of parental incarceration on children from the significant disadvantages these children face prior to the incarceration event. While the findings presented here do not make a case for causality, several methodological issues outlined in the existing body of literature have been addressed. Therefore a case can be made that the association between paternal incarceration and children's delinquency is quite robust.

The results also support the hypothesized relationship between incarceration and delinquency, via the mediating effects of negative-self feelings. The link between negative self-feelings and deviant adaptations is informed by a general theory of deviant adaptations to self-derotation (Kaplan 1975, 1980, 1986). According to Kaplan's general theory of deviant behavior (1980), the experience of negative self-feelings motivates one to reduce negative feelings and restore self-esteem. In the absence of effective conventional patterns, the person adopts deviant patterns that have the potential for avoiding, attacking, or substituting new deviant patterns for the conventional patterns that generated the distressful self-rejecting feelings (Kaplan 1975, 1980, 1986; Kaplan and Johnson 2001; Kaplan, Martin and Johnson 1986; Rosenberg and Kaplan 1982;

Rosenberg, Schooler and Schoenbach 1989). Thus, the experience of negative self-feelings resulting from a father's incarceration has salience during adolescence.

There is a long tradition of studying parent-child relationships and adolescent delinquency. However, the association between incarcerated parent-child relationships and delinquency during adolescence is less well understood (Johnson et al. 2011). Identity in this study primarily focused on identity's content areas rather than on global evaluative dimensions such as self-esteem or self-efficacy. As Matsueda (1992) demonstrated, those who believe that others see them as delinquents or troublemakers were more likely to evidence higher levels of delinquency, even after the initial levels of delinquency had been taken into account. The result supporting the hypothesized relationship between incarceration and delinquency, via the mediating effects of identity, is an important finding. It supports the view that identity issues are a more dominant preoccupation for young people trying to avoid a replay of their parents' problem lifestyles. Although this study does not provide enough evidence to completely unpack this relationship, this seems to be a significant source of stress in these children's lives. Giordano's (2010) symbolic interactionist perspective also highlights that emotions are an important dimension of the self's content. This idea is supported by this study by demonstrating that anger mediates the association between paternal incarceration and delinquency. It has been suggested that the angry self has meaning, incorporating aspects of social experiences, past circumstances, and emotional attitude taking into an imagined future (Giordano et al. 2007). The angry self can, for example, take care of itself in new and potentially frightening social situations. During adolescence, delinquent acts come

to be associated with excitement or thrills (Giordano et al. 2007). Yet this heightened positive emotionality can be difficult to sustain, and for those with chronic patterns of delinquency, may be left with later feelings of sadness and regret. This relationship may be more complex than the evidence in this study can explain, but negative emotions may directly inhibit the actor's ability to see a way out or make a concrete move away from delinquency. This was the first quantitative investigating operationalized scales of the qualitatively derived theoretical concepts developed by Giordano and colleagues (Giordano 2010).

Consistent with recent studies (Braman 2002, Giordano 2010, Wakefield and Wildeman 2011), the results indicate a father's incarceration has similar associations with delinquency for White, Black, and Hispanic adolescents. Thus, the findings suggest that a father's incarceration places children similarly "at risk" for increased delinquency, regardless of race. Similar to recent work in the area (Foster and Hagan 2013, Wildeman 2010), these findings also provide some evidence that mass imprisonment may contribute to a system of stratification based on child's gender. One possible explanation for the findings that boy's delinquency is mediated by anger and girl's delinquency is mediated by identity is that expressions of emotion can be gendered by parental controls and role expectations (Hagan and Foster 2003). This could result in females internalizing their distress in their identity and allow males to further externalize their distress through anger. Robins and Martin (1993) similarly suggest that differences in styles of deviant expression result from socialization experiences for males and females.

While this research demonstrates that the average effect of paternal imprisonment is harmful, much remains to be done. First, though the effects of paternal imprisonment are overwhelmingly negative for the average child, qualitative research is needed to determine the characteristics that may reduce or exacerbate this effect and the magnitude of the estimates is relatively small. Obtaining data that has more information on the reasons behind incarceration (such as crime type or a more detailed measure of criminal history) would significantly advance the research presented here and provide a more realistic point estimate of the effect of incarceration on children's delinquency. Lacking these data, we are left with a number of hypotheses regarding mediating or conditioning factors and fewer avenues with which to explore them.

Second, because of the small number of children with a mother incarcerated in the dataset, the effects of maternal incarceration were not assessed in this dissertation. Yet, research and theory suggest that maternal incarceration may have very different effects on children. Unlike the first problem raised above, more data on maternal incarceration has recently become available. While not analyzed here, I would like to include maternal incarceration data collection in my future research plans.

Finally, while this dissertation examines the effect of paternal incarceration on delinquency during childhood and adolescence, I would like to introduce longitudinal data analysis with the remaining two waves of second-generation data. I plan to explore the effect of paternal incarceration on children's contact with the criminal justice system and subsequent incarceration. I would also like to explore several other outcome variables, such as educational, economic, and familial outcomes.

Limitations

Although the present study has yielded findings that have theoretical implications, its design is not without flaws. The first limitation concerns my assessment of the Giordano neo-median constructs. The measure of agency used by this research does not reflect how the child aligns with certain family members more than others; rather it reflects the individual's conception of being a person who is more or less constrained by their family in general. Only these items were available in the dataset and thus the construct validity might therefore be lower than one would hope for. It is also important to point out that the happiness measures were quite limited.

Another limitation has to do with the issue of timing. The G1T7 survey was collected from 1993-1998. The G2T1 survey was collected from 1993-2003. The timing and nature of how questions were asked make it difficult to fully capture paternal imprisonment as a family event. One issue deals with the circumstances surrounding the incarceration. The data does not provide any context about the type of crime or duration of the incarceration. Nor is there any information about the family relationship during this period. Another issue has to do with the timing of the outcome measure. The question is phrased to gauge when the child was doing these behaviors most, how often were they doing them. It would be ideal to have a measure of delinquency before and after the incarceration during childhood and adolescence in order to better assess the impact of the incarceration. Also, the significance of the effect during late adolescence might have to do with children being aware of the incarceration. Future research will address whether this is due to adolescent experiences or lagged effects.

Finally, the measures related to child educational performance and temperament are all measured subjectively from the child's point of view. It would be preferable to have official grade point average data but those school records were not available during the analysis of this study. In reference to the temperament measures, there is something to be said about the child's perception of parent, teacher, and peer attitudes towards them. However it would be ideal to have firsthand measures as well. Hence this study has an exploratory component to it that can be used to guide future data collection efforts and study designs.

Conclusion and Policy Implications

The results of this dissertation emphasize the importance of incorporating social psychological theory in a criminological context. It is clear that the drastic growth in the U.S. prison population has collateral consequences not only for individuals, but also for their families and communities in which they live. It is of the utmost importance to acknowledge these complex relationships when formulating policies and programs to address the needs of the formerly incarcerated and their significant others. It may very well be the case that those needs come into conflict with one another. It is also important to note that these findings may not generalize to all policy environments. The children in this study were at least 11 years of age and are all from the Houston metropolitan area. The experiences of rural children or younger children may be very different and those children may have different programmatic needs.

Interventions should be designed for children that decrease the link between paternal incarceration and delinquency. This can be done, in part, by changing the negative self-feelings for boys and girls as a consequence of the incarceration. The research presented here can only demonstrate that paternal incarceration is stressful for children; it cannot present evidence on whether children would be better off with more or less contact with their incarcerated fathers. It does suggest, however, that the answer to this question will vary substantially across children at different developmental life stages. It is equally important to note that programming designed to help families experiencing paternal incarceration must develop a better understanding of the protective factors that lead to resilience for children. For instance, future studies that seek to inform policy should not disrupt or attempt to replace the positive role models or custodial relationships that develop in the absence of an incarcerated father. If the issue is to be framed as a matter of child well being it is imperative that the child's positive development is paramount.

REFERENCES

Aaron, Lauren and Danielle H. Dallaire. 2010. “Parental Incarceration and Multiple Risk Experiences: Effects on Family Dynamics and Children’s Delinquency.” *Journal of Youth & Adolescence* 39:1471-1484.

Acock, Alan C. 2006. *A Gentle Introduction to Stata*. College Station, TX: Stata Press.

Agnew, Robert. 2002. “Foundation for a General Strain Theory of Crime and Delinquency.” *Criminology* 30:47-88.

Baron, Reuben M., and David A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51: 1173-82.

Bartusch, Dawn Jeglum, and Ross L. Matsueda. 1996. "Gender, Reflected Appraisals, and Labeling: A Cross-Group Test of an Interactionist Theory of Delinquency." *Social Forces* 75:145-176.

Bentler, Peter M. 1995. *EQS Structural Equations Program Manual*. Encino, CA: Multivariate Software.

Bollen, Kenneth A. 1987. “Total, Direct, and Indirect Effects in Structural Equation Models.” *Sociological Methodology* 17:37-69.

-----. 1989 *Structural Equations with Latent Variables*. New York: Wiley.

Burton Jr., Velmer S., Francis T. Cullen, T. David Evans, R. Gregory Dunaway, Sesha R. Kethenini, and Gary L. Payne. 1995. “The Impact of Parental Controls on Delinquency.” *Journal of Criminal Justice* 23: 111-26.

Braman, Donald. 2002. “Families and Incarceration.” Pp. 117-135 in *Invisible Punishment: The Collateral Consequences of Mass Imprisonment*. Edited by Marc Mauer and Meda Chesney-Lind. New York: The New Press.

Cernkovich, Stephen A., and Peggy C. Giordano. 1987. “Family Relationships and Delinquency.” *Criminology* 25:295-313.

Chase-Lansdale Patricia L., Andrew J. Cherlin, and Kathleen E. Kiernan. 1995. “The Long-Term Effects of Parental Divorce on the Mental Health of Young Adults: A Developmental Perspective.” *Child Development* 66:1614-34.

Cherlin, Andrew J., Patricia L. Chase-Landsdale, and Christine McRae. 1998. “Effects

of Divorce on Mental Health Throughout the Life Course." *American Sociological Review* 63:239-249.

Clear, Todd, Dina R. Rose and Judith A. Ryder. 2001. "Incarceration and the Community: The Problem of Removing and Returning Offenders." *Crime and Delinquency* 47:335-351.

Cohn, Donnelly A. 1990. "Child-Mother Attachment of Six-Year Olds and Social Competence at School." *Child Development* 61:152-162.

Conger, Rand D., Katherine Conger, Glen H. Elder Jr., F. Lorenz, Ronald L. Simons, and L. Whitbeck. 1992. "A Family Process Model of Economic Hardship and Adjustment of Early Adolescent Boys." *Child Development* 63:526-41.

Conger, Rand D., and Glen H. Elder, Jr. 1994. "Family Stress and Adaptation: Reviewing the Evidence." Pp. 255-68 in *Families in Troubled Times: Adapting to Change in Rural America*, edited by Rand D. Conger and Glen H. Elder, Jr., in collaboration with Frederick O. Lorenz, Ronald L. Simons, and Les B. Whitbeck. New York: Aldine.

Comfort, Megan. 2008. *Doing Time Together: Love and Family in the Shadow of the Prison*. Chicago, IL: The University of Chicago Press.

Council on Crime and Justice. 2006. *The Children of Incarcerated Parents*. Minneapolis, MN: The Council on Crime and Justice.

Craigie, Terry-Ann L. 2011. "The Effect of Parental Incarceration on Early Childhood Behavior Problems: A Racial Comparison." *Journal of Ethnicity in Criminal Justice* 9:179-199.

Cullen, Francis T. and Paul Gendreau. 2000. "Assessing Correctional Rehabilitation: Policy, Practice, and Prospects." Pp. 109–175 in *Criminal Justice 2000*: *Volume 3—Policies, Processes, and Decisions of the Criminal Justice System*, edited by Julie Horney. Washington, DC: US Department of Justice, National Institute of Justice.

-----. 1989. "The Effectiveness of Correctional Rehabilitation" Pp. 23-44 in *The American Prison: Issues in Research Policy*, edited by L. Goodstein and Doris L. MacKenzie. New York: Plenum.

Dishion, Thomas J. and Rolf Loeber. 1985. "Male Adolescent Marijuana and Alcohol Use: The Role of Parents and Peers Revisited." *American Journal of Drug and Alcohol Abuse* 11: 11-25.

Ditton, Paul M. and Doris J. Wilson. 1999. *Truth in Sentencing in State Prisons*. Washington, DC: US Government Printing Office.

Dornbusch, Sanford M., J. Merrill Carlsmith, Steven J. Bushwall, Phillip L. Ritter, Herbert Leiderman, Albert H. Hastorf, and Ruth T. Gross. 1985. "Single Parents, Extended Households, and the Control of Adolescents." *Child Development* 56:326–341.

Duncan, Greg J., and Willard Rodgers. 1991. "Has Children's Poverty Become More Persistent?" *American Sociological Review* 56:538-50.

Edin, Kathryn. 2000. "Few Good Men: Why Low-Income Single Mothers Don't Get Married." *The American Prospect* 11: 26-31.

Edin, Kathryn and Laura Lein. 1996. "Work, Welfare, and Single Mothers' Economic Survival Strategies." *American Sociological Review* 61: 253-266.

Edin, Kathryn, Timothy J. Nelson, and Rechelle Paranal. 2004. "Fatherhood and Incarceration as Potential Turning Points in the Criminal Careers of Unskilled Men." Pp. 46-75 in *Imprisoning America: The Social Effects of Mass Incarceration*, edited by Mary Pattillo, David Weiman, and Bruce Western. New York: Russell Sage.

Farrington, David P. 1989. "Early Predictors of Adolescent Aggression and Adult Violence." *Violence and Victims* 4:79-100.

Forehand, Rex, Lisa Armistead, L., and David Corinne. 1997. "Is Adolescent Adjustment Following Parental Divorce a Function of Predivorce Adjustment?" *Journal of Abnormal Child Psychology* 25:157-166.

Foster, Holly. 2012. "The Strains of Maternal Imprisonment: Importation and Deprivation Stressors for Women and Children." *Journal of Criminal Justice* 40:221-229.

Foster, Holly and John Hagan. 2007. "Incarceration and Intergenerational Social Exclusion." *Social Problems* 54:399-433.

-----. 2009. "The Mass Incarceration of Parents in America: Issues of Race/Ethnicity, Collateral Damage to Children, and Prisoner Reentry." *The ANNALS of the American Academy of Political and Social Science* 623:179-194.

-----. 2013. "Maternal and Paternal Imprisonment in the Stress Process." *Social Science Research* 42:650-669.

Furstenberg, Frank. 1993. *Young Fathers in the Inner City: The Sources of Parental Involvement*. Thousand Oaks, CA: Center for the Advanced Study in the Behavioral Sciences.

Furstenberg, Frank, Jeanne Brooks-Gunn, and P. Chase-Landale. 1989. "Teenaged Pregnancy and Childbearing." *American Psychologist* 44:313-320.

Gainsborough, Jenni and Marc Mauer. 2000. *Diminishing Returns: Crime and Incarceration in the 1990s*. Washington, DC: The Sentencing Project.

Garfinkel, Irwin, Sara S. McLanahan, and Thomas L. Hanson. 1998. "A Patchwork Portrait of Nonresident Fathers." in *Fathers Under Fire: The Revolution in Child Support Enforcement*. New York: Russell Sage Foundation.

Garland, David. 2001a. *The Culture of Control: Crime and Social Order in Contemporary Society*. Chicago, IL: University of Chicago Press.

-----. 2001b. *Mass Imprisonment: Social Causes and Consequences*. London, UK: Sage Publications.

Giordano, Peggy C. 2010. *Legacies of Crime: A Follow-Up of the Children of Highly Delinquent Girls and Boys*. New York, NY: Cambridge University Press.

Giordano, Peggy C., Ryan D. Schroeder, and Stephen A. Cernkovich. 2007. "Emotions and Crime over the Life Course: A Neo-Median Perspective on Criminal Continuity and Change." *American Journal of Sociology* 112:1603-1661.

Glaze, Lauren E. and Laura M. Maruschak. 2008. *Parents in Prison and Their Minor Children*. Washington, DC: US Government Printing Office.

Gottfredson, Michael R. and Travis Hirschi. 1990. *A General Theory of Crime*. Stanford, CA: Stanford University Press.

Gray-Little, Bernadette and Adam R. Hafdahl. 2000. "Factors Influencing Racial Comparisons of Self-Esteem: A Quantitative Review." *Psychological Bulletin* 126:26-54.

Hagan, John and Ronit Dinovitzer. 1999. "Children of the Prison Generation: Collateral Consequences of Imprisonment for Children and Communities." *Crime and Justice* 26:121-162.

Hagan, John and Holly Foster. 2003. "S/he's a Rebel: Toward a Sequential Stress Theory of Delinquency and Gendered Pathways to Disadvantage in Emeriging Adulthood." *Social Forces* 82:53-86.

-----. 2007. “Incarceration and Intergenerational Social Exclusion.” *Social Problems* 54:399-433.
-----. 2012a. “Children of the American Prison Generation: Student and School Spillover Effects of Incarcerating Mothers.” *Law & Society Review* 46:37-69.

-----. 2012b. “Intergenerational Educational Effects of Mass Imprisonment in America.” *Sociology of Education* 85:259-286.

Halim, Shaneen. 2005. "Deviance as an Antecedent and Consequence of Early Transitions to Adulthood: Mediating Effects and Moderating Conditions." Unpublished doctoral dissertation. Texas A&M University, College Station.

Hancock, Gregory R. and Ralph O. Mueller. 2010. “Structural Equation Modeling.” Pp. 371-384 in *The Reviewer’s Guide to Quantitative Methods in the Social Sciences*, edited by Gregory R. Hancock and Ralph O. Mueller. New York, NY: Taylor and Francis.

Harrison, Paige M. and Allen J. Beck. 2003. *Prisoners in 2002*. Washington, DC: US Government Printing Office.

Hu, Li-tze, and Peter M. Bentler. 1995. *Evaluating Model Fit*. Thousand Oaks, CA: Sage Publications, Inc.

Huebner, Beth M. and Regan Gustafson. 2007. “The Effect of Maternal Incarceration on Adult Offspring Involvement in the Criminal Justice System.” *Journal of Criminal Justice 35*: 283-296.

Johnson, Elizabeth I. and Beth Easterling. 2012. “Understanding Unique Effects of Parental Incarceration on Children: Challenges, Progress, and Recommendations.” *Journal of Marriage and Family* 74:342-356.

Johnson, Wendi L., Peggy C. Giordano, Wendy D. Manning, and Monica A. Longmore. 2011. “Parent-Child Relations and Offending During Young Adulthood.” *Journal of Youth & Adolescence* 40:786-799.

Kaplan, Diane S., Ruth X. Liu and Howard B. Kaplan. 2005. “School Related Stress in Early Adolescence and Academic Performance Three Years Later: The Conditional Influence of Self Expectations.” *School Psychology of Education* 8:3-17.

Kaplan, Howard B. 1980. *Deviant Behavior in Defense of Self*. New York: Academic.

-----. 1986. *Social Psychology of Self-Referent Behavior*. New York, NY: Plenum Press.

-----. 2009. “Self-Referent Processes and the Explanation of Deviant Behavior.” Pp. 121-151 in *The Handbook on Crime and Deviance*, edited by Marvin D. Krohn et al. New York, NY: Springer Science.

Kaplan, Howard B. and Cheng-Hsien Lin. 2000. “Deviant Identity as a Moderator of the Relation between Negative Self-Feeling and Deviant Behavior.” *The Journal of Early Adolescence* 20:150-177.

-----. 2005. “Deviant Identity, Negative Self-Feelings, and Decreases in Deviant Behavior: The Moderating Influence of Conventional Bonding.” *Psychology, Crime & Law* 11:289-303.

Kaplan, Howard B. and Glen C. Tolle Jr. 2006. *The Cycle of Deviant Behavior: Investigating Intergenerational Parallelism*. New York, NY: Springer.

Kaplan, Howard B., Glen C. Tolle, and Takuji Yoshida. 2001. “Substance Use-Induced Diminution of Violence: A Countervailing Effect in Longitudinal Perspective.” *Criminology* 39:205-224.

Kaplan Howard B., Steven S. Martin, and Robert J. Johnson. 1986. “Self-Rejection and the Explanation of Deviance: Specification of the Structure Among Latent Constructs.” *American Journal of Sociology* 92:384-411.

Koita, Kiyofumi and Ruth A. Triplett. 1998. “An Examination of Gender and Race Effects on the Parental Appraisal Process: A Reanalysis of Matsueda’s Model of the Self.” *Criminal Justice and Behavior* 25:623-638.

Liu, Xiaoru and Howard B. Kaplan. 1999. “Explaining the Gender Difference in Adolescent Delinquent Behavior: A Longitudinal Test of Mediating Mechanisms.” *Criminology* 1:195-216.

Lewis-Beck, Michael S. 1995. *Data Analysis: An Introduction*. Thousand Oaks, CA: Sage Publications.

Manza, Jeff and Christopher Uggen. 2006. *Locked Out: Felon Disenfranchisement and American Democracy: Felon Disenfranchisement and American Democracy*. Oxford University Press.

Martinez, Ruben and Richard L. Dukes. 1991. "Ethnic and Gender Differences in Self-Esteem." *Youth and Society* 22:318-338.

Massoglia, Michael. 2008. “Incarceration, Health, and Racial Disparities in Health.” *Law & Society Review 42*:275-306.

Massoglia, Michael and Cody Warner. 2011. “The Consequences of Incarceration:

Challenges For Scientifically Informed and Policy-Relevant Research." *Criminology & Public Policy* 10:851-863.

Matsueda, Ross L. 1992. "Reflected Appraisals, Parental Labeling, and Delinquency: Specifying a Symbolic Interactionist Theory." *American Journal of Sociology* 97:1577-1611.

Merton, Robert K. 1938. "Social Structure and Anomie." *American Sociological Review* 3:672-682.

Mumola, Christopher J. 2000. *Incarcerated Parents and Their Children*. Washington, DC: Bureau of Justice Statistics Government Printing Office.

Murakumi, Jessica. 2002. "Gender and Depression: Explaining the Different Rates of Depression between Men and Women." *Perspectives in Psychology* 5:27-34.

Murray, Joseph. 2007. 'The Cycle of Punishment: Social Exclusion of Prisoners and Their Children." *Criminology and Criminal Justice* 7:55-81.

Murray, Joseph, and David P. Farrington. 2005. "Parental Imprisonment: Effects on Boys' Antisocial Behaviour and Delinquency through the Life-Course." *Journal of Child Psychology and Psychiatry* 46:1269-78.

-----. 2008a. "The Effects of Parental Imprsonement on Children." *Crime and Justice* 37:1-36.

-----. 2008b. "Parental Imprisonment: Long-Lasting Effects on Boys' Internalizing Problems through the Life Course." *Development and Psychopathology* 20:273-90.

Murray, Joseph, David P. Farrington, and Ivana Sekol. 2012. "Children's Antisocial Behavior, Mental Health, Drug Use, and Educational Performance After Parental Incarceration: A Systematic Review and Meta-Analysis." *Psychological Bulletin* 138:175-210.

Muthén, Bengt. 1984. "A General Structural Equation Model with Dichotomous, Ordered Categorical, and Continuous Latent Variable Indicators." *Psychometrika* 49:115-132.

Muthén, Bengt and Siek-Toon Khoo. 1998. "Longitudinal Studies of Achievement Growth Using Latent Variable Modeling." *Learning and Individual Differences* 2:73-101.

Muthén, Linda and Bengt Muthén. 2012. *Mplus Statistical Analysis with Latent Variables User's Guide Version 7*. Los Angeles, CA: Muthén and Muthén.

Pals, Heili and Howard B. Kaplan. 2013. "Cumulative and Relative Disadvantage as Long-Term Determinants of Negative Self-Feelings." *Sociological Inquiry* 83:130-153.

Pears, Katherine and Deborah Capaldi. 2001. "Intergenerational Transmission of Abuse: A Two-Generational Prospective Study of an At-Risk Sample. *Child Abuse and Neglect* 25:1439-1461.

Polce-Lynch, Mary. Barbara J. Myers, Wendy Kliewer, and Christopher Kilmartin. 2001. "Adolescent Self-Esteem and Gender: Exploring Relations to Sexual Harassment, Body Image, Media Influence, and Emotional Expression." *Journal of Youth and Adolescence* 30:225–245.

Pulkkinen, L. 1982. "Self-Control and Continuity from Childhood to Late Adolescence." in *Life Span Development and Behavior*, edited by P.B. Bates and O.G. Brim, Jr. New York, NY: Academic Press.

Riolo, Stephanie A., Tuan Anh Nguyen, John F. Greden, and Cheryl A. King. 2005. "Prevalence of Depression by Race/Ethnicity: Findings from the National Health and Nutrition Examination Survey III." *Journal Information* 95:988-1000.

Roettger, Michael E. and Raymond R. Swisher. 2011. "Associations of Fathers' History of Incarceration with Sons' Delinquency and Arrest Among Black, White, and Hispanic Males in the United States." *Criminology* 49:1109-1147.

Roettger, Michael E., Raymond R. Swisher, Danielle C. Kuhl, and Jorge Chavez. 2010. "Paternal Incarceration and Trajectories of Marijuana and Other Illegal Drug Use from Adolescence into Young Adulthood: Evidence From Longitudinal Panels of Males and Females in the United States." *Addiction* 106:121-132.

Rosenberg, Morris. 1989. *Society and the Adolescent Self-Image*. Middletown, CT: Wesleyan University Press.

Sampson, Robert J. and John H. Laub. 1993. *Crime in the Making: Pathways and Turning Points through Life*. Cambridge, MA: Harvard University Press.

Saris, Willem E., Albert Satorra, and Dag Sörbom. 1987. "The Detection and Correction of Specification Errors in Structural Equation Models." *Sociological Methodology* 17:105-129.

Sörbom, Dag. 1989. "Model Modification." *Psychometrika* 54:371-384.

Stiles, Beverly L. and Howard B. Kaplan. 2008. "The Effect of Early Incarceration on Life Outcomes." *International Journal of Sociological Research* 1:23-37.

Sutherland, Edwin H. 1947. *Principles of Criminology*. Philadelphia, PA: J. B. Lippincott Company.

Swisher, Raymond R. and Michael E. Roettger. 2012. "Father's Incarceration and Youth Delinquency and Depression: Examining Differences by Race and Ethnicity." *Journal of Research on Adolescence* 22:597-603.

Thornberry, Terence, Adrienne Freeman-Gallant, and Peter Lovegrove. 2009. "The Impact of Parental Stressors on the Intergenerational Transmission of Antisocial Behavior." *Journal of Youth and Adolescence* 38:312-322.

Travis, Jeremy and Michelle Waul. 2003. "Prisoners Once Removed: The Children and Families of Prisoners." Pp. 1-32 in *Prisoners Once Removed*, edited by Jeremy Travis and Michelle Waul. Washington, DC: Urban Institute Press.

Twenge, Jean M., and Jennifer Crocker. 2002. "Race and Self-Esteem: Meta-Analyses Comparing Whites, Blacks, Hispanics, Asians, and American Indians and Comment on Gray-Little and Hafdahl (2000)." *Psychological Bulletin* 128:371-408.

van de Rakt, Marieke, Joseph Murray, and Paul Nieuwbeerta. 2012. "The Long-Term Effects of Paternal Imprisonment on Criminal Trajectories of Children." *Journal of Research in Crime and Delinquency* 49:81-108.

van de Rakt, Marieke, Paul Nieuwbeerta, and Nan Dirk de Graaf. 2008. "Like Father Like Son: The Relationships between Conviction Trajectories of Fathers and their Sons and Daughters." *British Journal of Criminology* 48:538-556.

Visher, Christy A. and Jeremy Travis. 2003. "Transitions from Prison to Community: Understanding Individual Pathways." *Annual Review of Sociology* 29:89-113.

Wakefield, Sara. 2007. *The Consequences of Incarceration for Parents and Children*. Unpublished doctoral dissertation, University of Minnesota, Minneapolis.

Wakefield, Sara and Christropher Uggen. 2010. "Incarceration and Stratification." *Annual Review of Sociology* 36:387-406.

Wakefield, Sara and Christopher Wildeman. 2011. "Mass Imprisonment and Racial Disparities in Childhood Behavioral Problems." *Criminology and Public Policy* 10:793-819.

Western, Bruce. 2002. "The Impact of Incarceration on Wage Mobility and Inequality." *American Sociological Review* 67: 526-546.

-----. 2006. *Punishment and Inequality in America*. New York, NY: Russell Sage.

Western, Bruce and Chris Wildeman. 2009. "The Black Family and Mass Incarceration." *The ANNALS of the American Academy of Political and Social Science* 621:221-242.

Western, Bruce, Jeffrey R. Kling, and David F. Weiman. 2002. "The Labor Market Consequences of Incarceration." *Crime and Delinquency* 47:410–427.

Western, Bruce, Leonard M. Lopoo and Sara McLanahan. 2004. "Incarceration and the Bonds Among Parents in Fragile Families." Pp. 21-45 in *Imprisoning America: The Social Effects of Mass Incarceration*, edited by Mary Patillo, David Weiman, and Bruce Western. New York, NY: Russell Sage.

Wiesner, Margit and Deborah Capaldi. 2003. "Relations of Childhood and Adolescent Factors to Offending Trajectories of Young Men." *Journal of Research in Crime and Delinquency* 40:231-262.

Wildeman, Christopher. 2009. "Parental Imprisonment, the Prison Boom, and the Concentration of Childhood Disadvantage." *Demography* 46:265-280.

-----. 2010. "Paternal Incarceration and Children's Physically Aggressive Behaviors: Evidence from the Fragile Families and Child Wellbeing Study." *Social Forces* 89:285-310.

-----. 2011. "Commentary on Roettger et al. (2011): Confronting the elephant in the room." *Addiction* 106: 133–134.