

1-1-2016

An Assessment of the Effects of Parental Incarceration on Intragenerational and Intergenerational Mobility

Timothy E. McClure

Follow this and additional works at: <https://scholarsjunction.msstate.edu/td>

Recommended Citation

McClure, Timothy E., "An Assessment of the Effects of Parental Incarceration on Intragenerational and Intergenerational Mobility" (2016). *Theses and Dissertations*. 494.
<https://scholarsjunction.msstate.edu/td/494>

This Dissertation - Open Access is brought to you for free and open access by the Theses and Dissertations at Scholars Junction. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of Scholars Junction. For more information, please contact scholcomm@msstate.libanswers.com.

An assessment of the effects of parental incarceration on intragenerational and
intergenerational mobility

By

Timothy E. McClure

A Dissertation
Submitted to the Faculty of
Mississippi State University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy
in Sociology
in the Department of Sociology

Mississippi State, Mississippi

December 2016

Copyright by
Timothy E. McClure
2016

An assessment of the effects of parental incarceration on intragenerational and
intergenerational mobility

By

Timothy E. McClure

Approved:

David C. May
(Major Professor)

R. Gregory Dunaway
(Committee Member)

Kecia Johnson
(Committee Member)

Stacy H. Haynes
(Committee Member and Graduate Coordinator)

Rick Travis
Interim Dean
College of Arts & Sciences

Name: Timothy E. McClure

Date of Degree: December 9, 2016

Institution: Mississippi State University

Major Field: Sociology

Major Professor: David C. May

Title of Study: An assessment of the effects of parental incarceration on intragenerational and intergenerational mobility

Pages in Study: 271

Candidate for Degree of Doctor of Philosophy

In the past 40 years, the U.S. has experienced its largest expansion of incarceration. Sociological research has begun to examine the effects the dramatic rises in incarceration in the United States on other areas of social life. One area of research has examined the effects of parental incarceration on children. In this study, I examined the effects of parental incarceration on intragenerational and intergenerational socioeconomic mobility using data from a nationally-representative sample of respondents who had been studied from adolescence to young adulthood. Specifically, I examined the effects of parental incarceration prevalence and duration on three measures of socioeconomic status—household income, occupational prestige, and educational attainment—at young adulthood while controlling for measures of parental socioeconomic status and socioeconomic status during adolescence.

I found that the presence of parental incarceration, especially when it occurred before adulthood, exerted significant negative effects on all three measures of socioeconomic status at young adulthood. These effects were rather consistent

throughout my results. The duration of parental incarceration among those who experienced it exerted few significant effects on socioeconomic status.

I also found that the main mechanisms through which parental incarceration affected social mobility were early economic disadvantage and criminal justice contact. Parental incarceration had a significant negative effect on household income during adolescence. It also had a significant positive effect on arrests during adulthood. Low levels of household income during adolescence and high levels of arrests during adulthood, then, were associated with diminished socioeconomic life chances. Some of the effects of parental incarceration on social mobility were moderated by gender, race, and other demographic and contextual control variables, but the nature of those moderating effects was not consistent throughout my analyses.

These findings indicate parental incarceration helps set in motion a process of cumulative disadvantage and a process of the intergenerational transmission of offending (and the negative social and economic consequences that come with it). The effects of both of these processes are that children of parents who've been "locked up" are then "locked out" of economic opportunities. This process may help form and reinforce social class boundaries.

DEDICATION

I would like to dedicate this project to my parents, Robert and Mollie McClure. I could not have finished it without their unconditional love, patience, and encouragement. I deeply appreciate their support while I worked on this project and their support throughout my entire life. I could not have asked for better parents.

ACKNOWLEDGEMENTS

I would like to express my gratitude to several people who helped me on this project and throughout my time in graduate school. First, I would like to thank my major professor and dissertation committee chair, Dr. David C. May. Dr. May encouraged and inspired me throughout my entire graduate education. He also served as my major professor and Master's thesis advisor during my time at Eastern Kentucky University. Working with him as a Master's student opened my eyes to world of criminological and sociological research and inspired me to continue my graduate education at Mississippi State. It was truly serendipitous that he joined the faculty at Mississippi State while I was working on my dissertation. Once again, he provided the inspiration and encouragement I needed to keep going. I am forever grateful for his advice, encouragement, and patience in helping me to complete this project.

I would also like to thank the other members of my dissertation committee. Dr. R. Gregory Dunaway served as my dissertation committee chair and major professor when I began this project. He provided tremendous advice and support throughout this entire process. I know that he will be truly missed at Mississippi State. As both a committee member and graduate coordinator, Dr. Stacy H. Haynes also provided incredibly helpful advice, feedback, and support throughout my work on this project. Thank you for your help, Dr. Haynes. Dr. Kecia Johnson was an excellent addition to my dissertation committee. I would like to thank her for helping me to complete this project.

Finally, I would like to acknowledge the excellent staff members in the Department of Sociology at Mississippi State. Jan Wells, Pam Linley, and Paula Jones were incredibly supportive throughout my time at Mississippi State. I am very thankful for their help.

TABLE OF CONTENTS

DEDICATION	ii
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	xii
LIST OF FIGURES	xvi
CHAPTER	
I. INTRODUCTION	1
II. LITERATURE REVIEW	4
Effects of Incarceration on Inmates	6
Effects of Education and Labor Market Outcomes	6
Studies Using Official Data	7
Studies Using Survey Data	12
Studies Using Experimental Methods	17
Effects on Psychological Well-being	19
Effects of Parental Incarceration on Children and Families	23
Effects on Psychological Distress and Antisocial and Delinquent Behavior	23
Effects of Parental Incarceration on Family Economic Hardship, Education Outcomes, and Social Mobility	35
Family Economic Hardship	35
Educational Outcomes	37
Social Mobility	39
III. CONCEPTUAL FRAMEWORK	42
Theoretical Framework	42
Weberian Notions of Social Class	42
Weberian and Post-Weberian Notions of Social Closure	45
Incarceration and Weberian Notions of Class and Social Closure	47
Mechanisms of Social Exclusion	50
Stigmatization	50
Loss of Capital	51
Cumulative Disadvantage	52

Strain and Stress	54
Intergenerational Transmission of Offending	55
Racial and Ethnic Context	55
Conceptual Model and Hypotheses	56
Conceptual Model	56
Hypotheses	57
Direct Effects of Parental Incarceration on SES Outcomes	57
Moderation and Mediation Effects	59
Social Support	59
Cumulative Disadvantage and Disadvantage Saturation	60
Criminal Justice Contact	62
Social Isolation	64
Negative Emotions	65
Demographic Characteristics	67
Neighborhood Context	68
IV. DATA AND METHODS	71
Sampling Methods	71
Measures	74
Independent Variables	74
Parental Incarceration Prevalence	75
Parental Incarceration Duration	76
Descriptive Statistics	78
Dependent Variables	80
Wave IV Household Income	80
Wave IV Occupational Prestige	80
Wave IV Educational Attainment	81
Descriptive Statistics	81
Wave I, CJ Contact, and Parent SES Moderating and Mediating Variables	82
Wave I Social Support	82
Wave I Household Income	82
Parent Educational Attainment	83
Parent Occupational Prestige	83
Criminal Justice Contact	84
Descriptive statistics	84
Wave IV Mediating and Moderating Variables	85
Wave IV Social Isolation	85
Wave IV Depression	85
Wave IV Anger	86
Wave IV Stress	86
Descriptive Statistics	87
Demographic Characteristics	87
Race and Ethnicity	88
Gender and Age	89

Descriptive Statistics	89
Contextual Variables	90
Black Neighborhood.....	90
Proportion Hispanic.....	90
Urbanicity.....	90
Modal Education	91
Neighborhood Poverty.....	91
Descriptive Statistics	91
Analytical Strategy	92
Bivariate Analyses.....	93
Mobility Table Analysis.....	93
Pearson Correlations.....	93
Independent Samples T-tests for Mean and Proportion Differences	93
Multivariate Analyses.....	95
Mediating Effects and Blau and Duncan Status Attainment Models	96
Tests for Differences by Gender and Race.....	100
Weighting and Missing Data	100
V. RESULTS	102
Bivariate Analyses.....	102
Mobility Tables	103
Household Income Mobility.....	103
Occupational Prestige Mobility.....	106
Educational Attainment Mobility.....	108
Pearson Correlations.....	110
Bivariate Correlations with Primary Dependent Variables	110
Primary Independent Variables	110
Wave IV Mediating Variables.....	112
Wave I and Childhood Mediating Variables	113
Demographic Variables	113
Bivariate Correlations between Primary Independent Variables and Mediating Variables.....	115
Wave I and Childhood Mediating Variables	115
Tests for Mean and Proportion Differences	118
Differences by Gender and Race	118
Independent Variables	118
Dependent Variables	119
Differences by Parental Incarceration Prevalence.....	120
Dependent Variables	120
Mediating Variables	121
Multivariate Analyses.....	122
Effects of Parental Incarceration on Wave I and CJ Contact Mediating Variables	122

Effects of Parental Incarceration on Wave I Social Support	122
Effects of Parental Incarceration on Wave I Household Income	124
Effects of Parental Incarceration on Criminal Justice Contact.....	127
Effects of Parental Incarceration on Wave IV Mediating Variables	130
Effects of Parental Incarceration on Wave IV Social Isolation.....	130
Effects of Parental Incarceration on Wave IV Depression.....	133
Effects of Parental Incarceration on Wave IV Anger.....	135
Effects of Parental Incarceration on Wave IV Stress	138
Direct and Mediating Effects in the Relationship between Wave I/Childhood Parental Incarceration and Respondent SES variables.....	141
Direct Effects of Wave I PI Dummy on Wave IV Household Income	141
Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income	143
Wave I Social Support.....	144
Wave I Household Income	145
Direct Effects of Childhood PI Dummy on Wave IV Household Income	146
Tests for Mediation in the Relationship between Childhood I PI Dummy and Wave IV Household Income	147
Direct Effects of Wave I PI Duration on Wave IV Household Income	148
Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income	150
Wave I Social Support.....	151
Wave I Household Income	152
Direct Effects of Childhood PI Duration on Wave IV Household Income	153
Tests for Mediation in the Relationship between Childhood PI Duration and Wave IV Household Income	153
Direct Effects of Wave I PI Dummy on Wave IV Occupational Prestige	154
Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Occupational Prestige	156
Wave I Social Support.....	157
Wave I Household Income	158
Direct Effects of Childhood PI Dummy on Occupational Prestige.....	159
Direct Effects of Wave I PI Duration on Occupational Prestige.....	161
Tests for Mediation in the Relationship between Wave I PI Duration and Wave IV Occupational Prestige	163
Wave I Social Support.....	164
Wave I Household Income	165
Direct Effects of Childhood PI Duration on Adult Arrests	166

Tests for Mediation in the Relationship between Childhood PI Duration and Wave IV Occupational Prestige	167
Direct Effects of Wave I PI Dummy on Wave IV Educational Attainment	168
Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Educational Attainment.....	169
Wave I Social Support.....	170
Wave I Household Income	171
Direct Effects of Childhood PI Dummy on Wave IV Educational Attainment	172
Tests for Mediation in the Relationship between Childhood PI Dummy and Wave IV Educational Attainment.....	173
Direct Effects of Wave I PI Duration on Wave IV Educational Attainment	175
Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income	176
Wave I Social Support.....	177
Wave I Household Income	178
Direct Effects of Childhood PI Duration on Wave IV Educational Attainment	179
Tests for Mediation in the Relationship Between childhood PI Duration and Wave IV Educational Attainment	179
Direct and Mediating Effects in the Relationship between Wave IV Parental Incarceration and Respondent SES	180
Direct Effects of Wave IV PI Dummy on Wave IV Household Income	180
Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Household Income	182
Wave IV Social Isolation.....	185
Wave IV Depression.....	185
Wave IV Anger.....	186
Wave IV Stress	187
Direct Effects of Wave IV PI Duration on Wave IV Household Income	187
Tests for Mediation in the Relationship between Wave IV PI duration and Wave IV Household Income	189
Wave IV Social Isolation.....	192
Wave IV Depression.....	193
Wave IV Anger.....	193
Wave IV Stress	194
Direct Effects of Wave IV PI Dummy on Wave IV Occupational Prestige	194
Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Occupational Prestige	196
Wave IV Social Isolation.....	199

Wave IV Depression.....	200
Wave IV Anger.....	200
Wave IV Stress.....	201
Direct Effects of Wave IV PI Duration on Wave IV Occupational Prestige.....	202
Tests for Mediation in the Relationship between Wave IV PI Duration and Wave IV Occupational Prestige.....	203
Wave IV Social Isolation.....	206
Wave IV Depression.....	207
Wave IV Anger.....	207
Wave IV Stress.....	208
Direct Effects of Wave IV PI Dummy on Wave IV Educational Attainment.....	208
Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Educational Attainment.....	210
Wave IV Social Isolation.....	213
Wave IV Depression.....	214
Wave IV Anger.....	214
Wave IV Stress.....	215
Direct Effects of Wave IV PI Duration on Wave IV Educational Attainment.....	215
Tests for Mediation in the Relationship between Wave IV PI Duration and Wave IV Educational Attainment.....	217
Wave IV Social Isolation.....	220
Wave IV Depression.....	220
Wave IV Anger.....	221
Wave IV Stress.....	222
VI. DISCUSSION AND CONCLUSION.....	223
Summary of Findings.....	223
Direct Effects of Parental Incarceration on Primary Dependent Variables.....	224
Wave I and Criminal Justice Contact Mediating and Moderating Variables.....	226
Social Support.....	226
Wave I Household Income.....	228
Parent Occupational Prestige.....	229
Parent Education.....	230
Criminal Justice Contact.....	232
Wave IV Mediating and Moderating Variables.....	235
Wave IV Social Isolation.....	235
Wave IV Depression.....	236
Wave IV Anger.....	238
Wave IV Stress.....	239
Moderating Effects of Demographic Control Variables.....	240

Moderating Effects of Neighborhood Contextual Variables	241
Theoretical Implications	243
Policy Implications	245
Limitations	248
Add Health Sample	248
Measures Used	249
Measures Omitted	251
Temporal Ordering	252
Directions for Future Research	253
REFERENCES	255
APPENDIX	
A. CODING SCHEME FOR INDICATORS IN WAVE I SOCIAL SUPPORT SCALE	266
Wave I Social Support	267
B. CODING SCHEMA FOR PARENT SOCIOECONOMIC STATUS VARIABLES	268
C. CODING SCHEMA FOR INDICATORS IN SCALES FOR WAVE IV EMOTIONS VARIABLES	270
Wave IV Depression	271
Wave IV Anger	271
Wave IV Stress	271

LIST OF TABLES

4.1	Descriptive Statistics for Primary Independent Variables	79
4.2	Descriptive Statistics for Primary Dependent Variables	82
4.3	Descriptive Statistics for Wave I, CJ Contact, and Parent SES Mediating Variables.....	85
4.4	Descriptive Statistics for Wave IV Mediating and Moderating Variables	87
4.5	Descriptive Statistics for Demographic Variables.....	89
4.6	Descriptive Statistics for Contextual Variables	92
5.1	Household Income Mobility Table Layered by Wave I PI Dummy.....	104
5.2	Occupational Prestige Mobility Table Layered by Wave I PI Dummy.....	106
5.3	Educational Attainment Mobility Table Layered by Wave I PI Dummy.....	108
5.4	Pearson Correlations Between Primary Dependent Variables Between Primary Dependent Variables and All Other Variables.....	111
5.5	Pearson Correlations Between Primary Independent Variables and Wave I and CJ Contact Mediating Variables.....	116
5.6	Pearson Correlations Between Primary Independent Variables and Wave IV Mediating Variables	117
5.7	Results from Independent Samples T-tests for Mean and Proportion Differences in Primary Independent and Dependent Variables by Gender and Race	119
5.8	Results from Independent Samples T-tests for Mean Differences in Primary Dependent Variables and Mediating Variables by Parental Incarceration Dummy Variables.....	121
5.9	Wave I Social Support Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables	123

5.10	Wave I Social Support Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables	124
5.11	Wave I Household Income Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables	125
5.12	Wave I Household Income Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables	127
5.13	Adult Arrests Regressed on Childhood PI Dummy, Parent Social Class Variables, and Control Variables	128
5.14	Adult Arrests Regressed on Childhood PI Duration, Parent Social Class Variables, and Control Variables	129
5.15	Wave IV Social Isolation Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	131
5.16	Wave IV Social Isolation Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables	132
5.17	Wave IV Depression Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	134
5.18	Wave IV Depression Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables	135
5.19	Wave IV Anger Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	137
5.20	Wave IV Anger Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables	138
5.21	Wave IV Stress Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	140
5.22	Wave IV Stress Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables	141
5.23	Wave IV Household Income Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables	143
5.24	Direct and Indirect Effects of Wave I PI Dummy on Wave IV Household Income Using Wave I Mediating Variables	144

5.25	Direct and Indirect Effects of Childhood PI Dummy on Wave IV Household Income Using Adult Arrests as Mediating Variable	147
5.26	Wave IV Household Income Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables	150
5.27	Direct and Indirect Effects of Wave IV PI Duration on Wave IV Household Income Using Wave I Mediating Variables	151
5.28	Direct and Indirect Effects of Childhood PI Duration on Wave IV Household Income Using Adult Arrests as Mediating Variable	153
5.29	Wave IV Occupational Prestige Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables	156
5.30	Direct and Indirect Effects of Wave I PI Dummy on Wave IV Occupational Prestige Using Wave I Mediating Variables	157
5.31	Direct and Indirect Effects of Childhood PI Dummy on Wave IV Occupational Prestige Using Adult Arrests as Mediating Variable.....	160
5.32	Wave IV Occupational Prestige Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables	163
5.33	Direct and Indirect Effects of Wave I PI Duration on Wave IV Occupational Prestige Using Wave I Mediating Variables	164
5.34	Direct and Indirect Effects of Childhood PI Duration on Wave IV Occupational Prestige Using Adult Arrests as Mediating Variable.....	166
5.35	Wave IV Educational Attainment Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables	169
5.36	Direct and Indirect Effects of Wave I PI Dummy on Wave IV Educational Attainment Using Wave I Mediating Variables	170
5.37	Direct and Indirect Effects of Childhood PI Dummy on Wave IV Educational Attainment Using Adult Arrests as Mediating Variable.....	173
5.38	Wave IV Educational Attainment Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables	176
5.39	Direct and Indirect Effects of Wave I PI Duration on Wave IV Educational Attainment Using Wave I Mediating Variables	177

5.40	Direct and Indirect Effects of Childhood PI Duration on Wave IV Educational Attainment Using Adult Arrests as Mediating Variable.....	179
5.41	Wave IV Household Income Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	182
5.42	Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Household Income Using Wave IV Mediating Variables	184
5.43	Wave IV Household Income Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables	189
5.44	Direct and Indirect Effects of Wave IV PI Duration on Wave IV Household Income Using Wave IV Mediating Variables	191
5.45	Wave IV Occupational Prestige Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	196
5.46	Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Occupational Prestige Using Wave IV Mediating Variables	198
5.47	Wave IV Occupational Prestige Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables	203
5.48	Direct and Indirect Effects of Wave IV PI Duration on Wave IV Occupational Prestige Using Wave IV Mediating Variables	205
5.49	Wave IV Educational Attainment Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables	210
5.50	Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Educational Attainment Using Wave IV Mediating Variables.....	212
5.51	Wave IV Educational Attainment Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables	217
5.52	Direct and Indirect Effects of Wave IV PI Duration on Wave IV Educational Attainment Using Wave IV Mediating Variables.....	219

LIST OF FIGURES

3.1	Full Conceptual Model	58
4.1	Analysis Strategy for Moderation Effects.....	96
4.2	Mediation Analysis Diagram	98
4.3	Analysis Strategy for Mediating Effects.....	99

CHAPTER I

INTRODUCTION

Due to changes in public opinion, political environments, and public policies, the incarceration rate in the United States has grown by more than 700 percent in the past 40 years, causing the U.S. to have the highest incarceration rate in the world (Mauer 2006; Kaeble, Glaze, Tsoutis, and Minton 2015; Guerino, Harrison, and Sabol 2011; Walmsley 2009). In 2014, more than 2.2 million people were detained in prisons in the United States (Kaeble et al. 2015). Millions more have been incarcerated at some point in their lives. In fact, estimates show that between two and three percent of all males over the age of 40 have experienced incarceration at some point in their lives (Petit and Western 2004). Mauer (1999) calls the dramatic rise in incarceration over the past 40 years a “great social experiment” in penal policy and practice. This is because it was meted out without fully understanding the magnitude or breadth of its consequences on other areas of social life. Social scientists, however, have made significant efforts to examine not only the intended consequences of this experiment on criminal behavior, but also the unintended consequences in a number of different areas of social life ranging from public health to politics.

The effects of incarceration on social class outcomes and the effects of incarceration on families have garnered special attention in the incarceration literature. Incarceration is thought to limit individuals’ life chances by altering their life trajectories,

creating formal and informal stigma that weakens their position in the labor market, creating or aggravating emotional problems, and, in some cases, increasing the likelihood of future offending and incarceration. Most empirical studies confirm the deleterious effects of incarceration in these areas (see Western 2007 for review). Having a history of incarceration has been linked to trouble finding employment, slower wage growth, loss of social capital, denial of public assistance benefits, problems finding housing, and several other negative economic outcomes. With such a high percentage of Americans experiencing incarceration, such high disparities in incarceration by race and socioeconomic status (SES), and the well-documented adverse effects that incarceration has on individuals' later life chances, it is clear that incarceration is a powerful social force that is helping create and maintain social divisions in the hierarchy of American society (Wildeman 2009).

The effects of incarceration can also extend to the families of individuals who are incarcerated. When a parent is absent due to incarceration, it often places an increased economic burden on families through the loss of family income (see Hairston 2007 for review). The trauma of the separation, the stigmatization associated with incarceration, and the stresses of added responsibility during the parent's incarceration often places a psychological burden on both adults and children. While most of the literature on the social and economic consequences of incarceration has focused on the effects on adults within their own life course, a recently invigorated body of research has begun to examine the effects of incarceration on the children of those who are incarcerated.

The major contribution of this study is that it bridges a major gap in the literatures on the effects of incarceration. Several researchers have investigated the effects of

incarceration on the social class outcomes of ex-inmates. Many others have investigated the social and economic effects of parental incarceration during childhood. However, few researchers have examined the long-term effects of parental incarceration on the intragenerational and intergenerational movement of individuals up and down the social class ladder. Even fewer have examined the mechanisms through which parental incarceration affects movement on the social class ladder. This study is a first step in understanding these effects and the mechanisms through which they occur.

In this study, I examine in great detail whether or not (and the extent to which) the effects of incarceration on social class outcomes are limited to the generation of ex-inmates who've experienced it. I also examine whether or not (and the extent to which) any intergenerational effects of parental incarceration are limited to childhood. Finally, I examine the role that the intergenerational transmission offending, emotional stress, and several other variables mediate and moderate the long-term effects of parental incarceration on social and economic outcomes.

CHAPTER II

LITERATURE REVIEW

Beginning in the 1970s, the United States saw a backlash against the ideals of rehabilitation touted by criminal justice policy makers in the middle of the 20th century. This backlash came as the result of rising crime rates in the 1960s, an increase in the fear of crime, research that seemed to indicate that rehabilitation programs were not effective at reducing crime, and a general conservative political movement. Policymakers reacted to this backlash by enacting policies such as mandatory minimum and determinate sentencing structures, reduction of the use of parole, and truth-in-sentencing policies that were geared toward controlling crime through incapacitation, deterrence, and retribution rather than rehabilitation. The policies of this “get-tough” era led to unprecedented increases in incarceration the U.S. from the early 1970s to the late 2000s. However, incarceration declined slightly during the 2010s.

The raw number of Americans in prison and jail has followed a general upward trend since 1972. Approximately 200,000 individuals were in prison in 1972. This number rose to a peak of around 1.6 million in 2009 (an increase of nearly 800 percent from 1972) and then plateaued until 2014. With jail inmates included, the total number of incarcerated individuals reached a peak of 2.3 million in 2008 and generally plateaued until 2014, declining only slightly to 2.2 million individuals incarcerated. Incarceration rates also rose dramatically during this period. The imprisonment rate in the U.S. was

approximately 100 per 100,000 in the population in 1972. This rate peaked at 510 per 100,000 in the population in 2007 and 2008. It declined slightly to 470 per 100,000 in 2014. With both prison jail inmates included, the overall incarceration rate in the U.S. peaked at 760 per 100,000 in 2007 and 2008 and declined slightly to 690 per 100,000 in 2014. As a result of the overall growth in incarceration in the U.S. over the past four decades, the U.S. now leads all other nations in incarceration rates (Garland 2001; Sentencing Project 2006; Kaeble et al. 2015; Guerino, Harrison, and Sabol 2011).

The “get-tough” era of criminal justice policy also led to an increase in the number of incarcerated parents. This number grew from around 450,000 in 1991 to around 800,000 in 2007, an increase of nearly 80 percent. While the increase in the number of parents in prison (and the number of children with an incarcerated parent) grew at a slightly slower rate than the total number of incarcerated individuals during this period, the growth in the number of mothers in prisons (as well as the number of females incarcerated more generally) far outpaced the growth in overall incarceration, with maternal incarceration increasing at a rate of 122 percent (29,500 to 65,600) and paternal incarceration increasing at a rate of 77 percent (423,000 to 744,200). The number of children with an incarcerated mother grew by 131 percent (63,900 to 147,400) and the number of children with incarcerated fathers grew by 77 percent (881,500 to 1,559,200). This growth led to a situation where a total of approximately 2.3 percent (or 1.7 million) children had a parent incarcerated in 2007 (Glaze and Maruschak 2008).

In this section, I begin by detailing the economic and psychological effects of incarceration and other forms of criminal justice contact on the individuals who actually experience it. I then examine the many effects that incarceration can have on family

members of incarcerated individuals. I also highlight the small body of literature that connects these two lines of research.

Effects of Incarceration on Inmates

Effects of Education and Labor Market Outcomes

A large portion of the literature on the effects of incarceration focuses on how incarceration affects educational attainment and the employment and earnings potential of prisoners after release. While the literature generally shows that incarceration has a deleterious effect on both employment and earnings throughout the life course, the direction of this relationship is not always consistent (see Wakefield and Uggen 2010 for review). This is especially true for studies examining the short-term effects of incarceration. Many of these studies illustrate the difficulties ex-inmates face in finding employment, or at least employment in high-wage jobs after release, because of the stigmatizing and psychological effects of incarceration. Others show that released inmates are actually more likely to be employed and have higher wages immediately following release (compared to just before they were incarcerated) because their parole conditions dictate that they be employed. Still others show that ex-inmates are more likely to be employed and have higher wages at younger ages because they are forced to enter the labor market (rather than pursuing higher education). Nevertheless, the wage *growth* of ex-inmates is generally much slower than their counterparts and long-term employment probabilities are lower; thus incarceration appears to have a generally deleterious economic effect of ex-inmates (Wakefield and Uggen 2010).

Researchers in this area have employed three major research methods to examine the economic effects of incarceration: use of official records, use of survey data, and use

of experimental methods. Many studies also use a combination of official data and survey data. Below, I divide the literature by the primary research method employed.

Studies Using Official Data

Many researchers examining the effects of incarceration on economic outcomes have taken advantage of data from official sources such as pre-sentence investigation (PSI) reports, unemployment insurance records, federal court processing data, and/or data from state correctional departments. In these studies, researchers have typically compared pre- and post-incarceration employment status and/or wages among a sample of individuals who have been convicted in a criminal court. These researchers typically utilized two or more different sources of official data and/or pair official data with survey data. Others have used macro-level official data to examine the effects of incarceration rates on unemployment rates and wages.

One of the first studies to use official data examined the effects of conviction on occupational status among white-collar offenders. Using data from PSI reports and interviews from a small sample of white-collar offenders, Benson (1984) found that conviction for a white-collar criminal offense led to a significant initial reduction in occupational prestige scores between the time of offense and the time of conviction, but that most offenders had recovered most or all of their occupational status by the time their file had been reviewed by the researcher. Younger workers and public sector workers both experienced a greater initial reduction in occupational prestige, but both also had a greater amount of recovery of occupational prestige after their sentence. Interestingly, when compared to those sentenced to work release or probation,

incarcerated individuals had a greater initial loss of occupational prestige, but also had a greater recovery of occupational prestige after conviction.

Lott (1992) used official data to compare pre-conviction and post-conviction legitimate income among federal probationers and parolees convicted of drug offenses. He found that drug convictions only led to significant reductions in income when they were accompanied by incarceration, fines, and/or restitution payments. Further, the lost income during incarceration appeared to be more economically damaging than fines or restitution among these offenders

Waldfoegel (1994) combined data from PSI reports with data from monthly probation reports for probationers and parolees convicted of fraud and larceny in Federal Courts to compare pre- and post-conviction employment probability and income. He found that conviction had a significant negative effect on employment, income, and income trajectories and that the effects of conviction were greater among offenders who held a job that required public trust, offenders who had served a prison sentence, and offenders who were highly educated. The finding that offenders saw the greatest economic penalties as the result of conviction suggests not only that incarceration has effects above and beyond conviction, but also that both conviction and incarceration affect economic outcomes by placing negative stigma on inmates rather than simply reducing or reversing their human capital development.

Grogger (1995) used unemployment insurance records and police records in California as well as data from the 1979 National Longitudinal Survey of Youth (NLSY79) to examine the effects of arrest, conviction, and incarceration on income and employment. He found that all three forms of criminal justice contact had negative

effects on both employment and earnings but that these effects were more short-lived than effects found in previous studies that had utilized survey data alone. In fact, earnings trajectories of those who experienced arrest, conviction, and/or incarceration typically re-aligned with the earnings trajectories of their non-arrested counterparts within 18 months after release. The author suggested that the short-term effects of incarceration that he detected may have been the result of not being able to control for sentence length in his analyses.

Using a similar data source, Needels (1996) examined the effects of demographic and human capital variables on wages and employment among formerly incarcerated men in Georgia. Her results show that both employment levels and earnings were low for all ex-inmates after incarceration. Employment levels did not vary by race and education throughout the course of the study. However, incarceration did impede earnings growth more for blacks and less-educated individuals. Length of sentence did not affect post-release earnings.

Western and Petit (2000) examined the effects of macro-level male incarceration rates on male employment rates by race, age, and educational attainment. They observed reductions in overall male employment rates when incarcerated males were included. These reductions were greater for younger individuals, blacks, and high school dropouts. These findings, combined with findings showing large racial disparities in incarceration, suggest that black-white employment inequality may be underestimated by standard measures of employment. Western and Petit (2005) also examined the effects of incarceration on the wage gap between blacks and whites. The authors point out that although black-white wage inequality decreased in the 1980s and 1990s, much of that

decrease can be attributed to concurrent increases in black unemployment. That is, wage inequality decreased because so many black workers in low wage-earning positions workers left the labor force. They also found a similar effect of incarceration; wage inequality decreased because so many black workers in low wage-earning positions were incarcerated during the 1980s and 1990s. These findings suggest that conventional measures of wage inequality may exaggerate decreases in black-white economic inequality.

Also using PSI data, Kerley and Copes (2004) compared the effects of arrest, conviction, and incarceration on employment stability between white-collar and street-offenders convicted in federal district courts. They found that members of their sample who had been arrested more often, been given longer sentences, and entered the criminal justice system earlier had significantly lower levels of employment stability. However, these effects were more pronounced for street-level offenders than for white-collar offenders. White-collar offenders were more able than their street-level counterparts to recover and find stable employment following to their criminal justice contact, even though their wages may have been significantly reduced. Using the same data, Kerley, Benson, Lee, and Cullen (2004) also examined the effects of criminal justice contact on income. Once again, all measures of criminal justice contact (arrest, timing, and time sentenced) were negatively associated with economic well-being. When disaggregated by race, total number of arrests and total time sentenced were similarly associated with income (significantly and negatively), but early arrest and incarceration (before the age of 24) demonstrated a significant and negative relationship with income only among whites. This suggests that the timing of criminal justice contact is more important than the

frequency and duration of criminal justice contact in explaining differential effects by race. Further, this suggests that whites lose more earning potential than blacks when they are incarcerated because they have more economic opportunities.

Holzer, Offner, and Sorenson (2005) examined the effects of state-level incarceration rates and child support enforcement policy on labor force participation rates and employment rates of black males ages 16 to 34. They found that increases in incarceration rates (more than child support enforcement toughness) led to decreases in labor force participation rates, especially among black males ages 25-34. Also, incarceration rates and child welfare policy variables accounted for about half of the reduction in labor force participation during the course of their study (1979-2000).

Kling (2006) and LaLonde and Cho (2008) both tracked the employment statuses and earnings histories of inmates both preceding and succeeding their sentences using state correctional and unemployment insurance records. Interestingly, both studies found that employment rates and wages were higher after inmates' incarceration, especially in the short term. The authors attribute these findings to four factors. First, there are generally higher retention rates among employees who have just been released from prison. Next, incarceration dissolves many inmates' connections to illegitimate labor markets. Third, incarceration may deter inmates from illegitimate markets. Finally, rehabilitative work programs in some prisons may direct inmates away from illegitimate markets.

Finally, Petit and Lyons (2009) used unemployment insurance records and records from the Washington State Department of Corrections to examine whether the effects of prison incarceration history on employment and wages varied by age. They

found that, among the male ex-inmates in their study, post-conviction wages were significantly lower and wage trajectories were significantly flatter when compared to pre-incarceration wages and wage trajectories. In addition, the effects of incarceration on wages and wage trajectories did not significantly vary by the timing of the incarceration in the life course, the age of the ex-inmate, the education of the ex-inmate, or the prior work history of the ex-inmate. Regarding employment status, ex-inmates were more likely to be employed in the quarter immediately following their release from prison when compared to the quarter before they were incarcerated. However, within 6-10 quarters after release from prison, post-conviction employment probabilities fell to pre-incarceration levels and continued to fall afterward. There were age differences in this effect, where younger inmates experienced a greater employment penalty than older inmates. The authors suggest that this finding may be the result of a lower likelihood of high school or GED completion among these inmates. Taken as a whole, these findings suggest that incarceration has stigmatizing effects that persist through all stages of the life course.

Studies Using Survey Data

The second approach to examining the effects of incarceration on labor market outcomes is the use of longitudinal survey data. Compared to other methods, this approach allows researchers to examine not only how incarceration alters employment and earnings trajectories throughout the life course, but also compare those with an incarceration history to those without an incarceration history. This method also allows for the inclusion of more control, mediating, and moderating variables. In one of the earliest examples of this methodological approach, Thornberry and Christenson (1984)

examined the reciprocal relationship between arrest and unemployment. Using survey data from a cohort of Philadelphia respondents in their early twenties, they found that arrest and unemployment had a positive and reciprocal relationship throughout the course of the study.

Monk-Turner (1989) also examined the effects of criminal involvement on labor market outcomes using a sample of white male full-time workers who participated in the National Longitudinal Survey of Labor Market Experiences (NLS). However, rather than using arrests, she used expulsion, suspension, and commitment to a correctional institution during high school to predict educational attainment and occupational status during adulthood. She found that respondents who had received at least one form of punishment during high school had lower educational attainment levels on average, but did not differ significantly with regard to occupational status scores.

Sampson and Laub (1990) examined the famous Glueck data and found a reciprocal relationship between criminal involvement and educational and labor market outcomes. Self-reported delinquency and arrest during childhood and adolescence were associated with lower levels of occupational status, economic independence, educational attainment, and job stability in early adulthood. Lower levels of job stability (but not income) during early adulthood were then associated with increased levels of criminal involvement in both early and later adulthood.

In a study of British adolescents at ages 17 and 19, Nagin and Waldfogel (1995) found that criminality had no significant effects on wages and job stability, but that criminal conviction had significant effects on both. Criminal conviction had a negative effect on job stability, but a surprisingly positive effect on wages. The authors attributed

this finding to the fact that individuals with a criminal conviction are more likely to start career jobs during adolescence that have higher starting salaries yet flatter wage trajectories than the temporary, non-career-oriented jobs that other individuals are likely to take at this age as they pursue higher education. They argue that their findings support the hypothesis that incarceration, at least when it is experienced at younger ages, diminishes labor market opportunities through both the process of stigmatization and by reducing inmates' potential for human capital accumulation.

Bushway (1998) investigated the effects of arrest and criminal activity on job stability (whether the respondent had more than one job in the past 40 weeks) and job length (number of weeks spent at the respondent's current job) in young adulthood among white males who participated in the National Youth Survey (NYS). They found that having been arrested, even for minor offenses, significantly reduced the number of weeks spent at a job from about 42 weeks to about 31 weeks, even when controlling for self-reported criminal activity. However, criminal activity had no effect on job length and neither arrest nor criminal activity had a significant effect on job stability. Combined, these findings suggest that it is the formal labeling by the criminal justice system, not embeddedness in a criminal lifestyle per se, that diminishes job prospects of individuals.

Many studies have utilized the wide array of variables available in NLSY79 to examine the direct and indirect effects of incarceration on labor market outcomes. For example, in a study using data from NLSY79, Tanner, Davies, and O'Grady (1999) examined the effects of a number of measures of criminal involvement during a time period spanning from adolescence (ages 14 to 17) to early adulthood (ages 25 to 35) on

several education and labor market outcomes in early adulthood. They examined the effects of four measures of self-reported criminal/delinquent behaviors (i.e., violence, skipping school, drug use, and property crime) and a measure of criminal justice system involvement (i.e., how many times the respondent had been stopped by police, booked, charged, and/or convicted). For both males and females, all five measures of criminal involvement exerted a negative effect on all three of their educational attainment variables (i.e., highest grade completed, high school degree attainment, and college degree attainment). However, while all criminal/delinquent involvement measures had significant negative effects on employment for males, none had significant effects on employment for females. Likewise, property crime and drug use had negative effects on occupational prestige in the final models for males, but no crime/delinquency measure had a significant effect on occupational prestige in the final model for females. The authors argue that because they used a sample with a wide array of economic backgrounds, not just the disenfranchised youth that previous studies had used, their findings show that the deleterious effects of delinquency and criminal justice system involvement exist throughout the entire socioeconomic spectrum. This is because delinquency and criminal justice system involvement can both prevent individuals from acquiring the human, social, and cultural capital necessary for status attainment and erode the human, social, and cultural capital of those who already have it.

Western (2002) also used NLSY79 data and found that respondents with prison experience not only earned less in raw wages, but also had about 30 percent lower wage growth (or what they call wage mobility) over time. Western argues that these findings show that incarceration seems to be a significant turning point in the life course with

regard to employment outcomes. Further, Western concluded that the decreased wage mobility of ex-prisoners helps to increase racial inequality in wage earnings by adding to the accumulation of disadvantage that many minorities face. Huebner (2005) also tested the application of the life course perspective using NLSY79 data. She found that incarceration significantly decreased the probability of both employment and marriage among respondents. However, if respondents were able to attain employment, they were more likely to get married, suggesting that these milestones mitigate the negative effects of imprisonment.

Davies and Tanner (2003) used data from NLSY79 to examine the effects of several forms of criminal labeling on occupational status, income, and hours and weeks worked. They found that arrest, criminal conviction, criminal sentencing, and incarceration had negative effects on occupational status, income, and hours and weeks worked, even when controlling for prior criminality. Incarceration had the greatest effects overall. The effects of criminal labeling on labor market outcomes were stronger among males. The authors also found a cumulative negative effect of criminal labeling where the effects of criminal justice contact became greater in magnitude as time progressed.

Many other researchers have used the more recent 1997 National Longitudinal Survey of Youth (NLSY97) to examine the effects of incarceration. Apel and Sweeten (2010) compared the effects of experiencing a criminal conviction with incarceration during the transition to adulthood to the effects of experiencing a criminal conviction without incarceration on several measures employment and income. They found that convicted respondents who experienced incarceration were less likely to be employed

and had lower earnings (in the legitimate labor market). This was not because individuals with a history of incarceration were looking for work and were not able to find it, but because they more likely to have dropped out of the labor force entirely. These findings not only illustrate the unique negative effects of incarceration (when compared to other criminal sanctions) on labor market outcomes, but also that diminished human capital, not just legal stigma, creates barriers in finding legitimate employment with high wages. The conclusion that incarceration affects employment through diminished human capital is also supported by the authors' other findings that incarceration had a greater negative effect on high school completion than conviction alone.

Finally, Wiesner, Kim, and Capaldi (2010) examined the effects of juvenile and adult arrests on characteristics of employment history among young adults who participated in the Oregon Youth Study. They found that participants who had been arrested more often as youths experienced more months of unemployment, but were not more likely to have been fired from a job. Adult arrests had no significant effects on employment history.

Studies Using Experimental Methods

A smaller line of research has used experimental methods to examine the effects of conviction and incarceration on employment. In these "audit studies," researchers presented fictional applicants with similar work and educational backgrounds to employers seeking to fill a position. These applicants varied only on their incarceration history and a limited number of other variables such as race and gender. After presenting applicants to employers, researchers examined the rates at which employers called them

back. This method has a clear advantage over survey research and the use of official records because it allows researchers to directly examine the stigmatization effect of incarceration by testing for employer discrimination in the hiring process. It also allows for random assignment of conviction and incarceration histories to different employers.

Schwartz and Skolnick (1962) were the first known researchers to examine the stigmatizing effects of criminal justice contact using this methodological approach. They mailed 100 employment applications and letters to employers in New York who were hiring low-skill workers. Each application presented the same fictional applicant with the same qualifications, but they varied regarding the criminal history of the applicant.

Twenty-five indicated that the applicant had been tried and found guilty for assault, 25 indicated that applicant had been tried and acquitted for assault, 25 indicated that the applicant had been tried and acquitted for assault and also included a fictional letter from a judge certifying the acquittal and explaining the presumption of innocence, and 25 indicated no criminal history for the applicant. Not surprisingly, the applicants without any indication of a criminal history received significantly more positive responses than the other groups, followed by those who had been acquitted but did not include a letter from a judge, those who had been acquitted with a letter from a judge, and then those who had been convicted.

Pager (2007, 2003) also used experimental methods to provide a more recent examination of the stigmatizing effects of incarceration and to determine if these effects differ by race. In her experiment, she sent two pairs of male “testers” to apply for several jobs in Milwaukee. The testers all had the same work experience, physical appearance, and general presentation style but one was assigned to report that he had been convicted

of a felony drug offense and served eighteen months in prison, while the other was assigned to report no criminal history. Also, one pair included two white applicants while the other included two black applicants. To measure the effect of stigmatization on employability, Pager compared the callback rates for the different groups. She found that: 1) black applicants received callbacks at a much lower rate than white applicants, regardless of their criminal history status, 2) applicants who reported a criminal history were called back at a much lower rate than applicants with no criminal history, and 3) the differential between the percentage of applicants without a criminal history who received callbacks and percentage of applicants with a criminal history who received callbacks was much higher for blacks than it was for whites. In fact, the callback rate for white applicants with a criminal history was about half of the callback for whites without a criminal history, but the callback rate for black applicants with a criminal history was about a third of the callback rate for black applicants without a criminal history. Thus, in this study, the penalty for having a criminal/incarceration history was relatively greater for blacks than it was for whites.

Effects on Psychological Well-being

While most research shows incarcerated individuals experience levels of anxiety, depression, and anger that are higher than the general population, there is no consensus on either the nature or the extent of the psychological impact of incarceration. Most studies suggest that the characteristics of the prison climate such as separation from family and friends, coercive control, and poor living conditions almost inevitably induce or compound negative psychological states. However, others suggest that the prison experience is not as negative as most would predict and prison can actually promote both

physical and psychological well-being. This lack of consensus stems from the fact that not everyone experiences prison in the same way. Each individual enters prison with a unique psychological and sociological background and has a unique set of experiences while in prison. Both influence the psychological effect of incarceration. Therefore, most research has sought not to identify a universal psychological impact of incarceration, but to differentiate between the conditions that make it more negative and the conditions that make it more positive.

The extent and type of one's social network is the focus of much of the research in this area. However, there are mixed findings throughout the literature. Some research shows that social integration increases psychological distress, while other research shows that it decreases or has no effect on psychological distress. For example, in a survey of jail inmates, Lindquist (2000) found those inmates who were married and had stronger social support inside and outside the prison reported more psychological distress. The author attributed this finding to the idea that those with stronger social ties are more vulnerable to distress and more likely to face stigmatization. Likewise, Lanier (1993) found that fathers in a maximum-security prison experienced higher levels of depression and concern for their parent-child relationships when they perceived themselves as being detached from their children. Wooldredge (1999) also found that stronger social ties reduce psychological distress. In this study, incarcerated fathers with stronger relationships and inmates with more frequent contact with friends and family faced less psychological distress. Though most research suggests that positive social relationships mitigate the negative psychological effects of incarceration, Hochstetler, Murphy, and

Simons (2004) found no effect of the quality of social relationships on the prevalence of anxiety, depression, and post-traumatic stress (PTS) symptoms.

An individual's experiences while in prison may also mediate the psychological effects of imprisonment. Research shows that victimization while in prison greatly increases the probability that an inmate will face psychological distress during and after their incarceration. Wooldredge (1999) found that inmates who had been victimized in prison reported more anxiety, depression, and stress than those who had not. Similarly, Hoschstetler et al. (2004) found that, among released inmates, victimization while incarcerated not only directly produced negative psychological affects (i.e., depressive and PTS symptoms), but also intensified the negative psychological effects of poor pre-prison conditions. While it is generally not classified as victimization, long-term solitary confinement while in prison has also been shown to significantly increase almost every type of negative psychological affect among prisoners. In fact, in a review of studies of long-term confinement prisoners and normal custody prisoners, Haney (2002) found that the prevalence of psychological trauma symptoms and psychopathological symptoms was more than three times higher among long-term confinement prisoners. Haney proposes that the intense institutionalization, lack of activity, and lack of interpersonal contact inherent in this practice cause inmates to lose their individual identity, social skills, and their connection to the real world. It also makes it difficult to return to the general population.

While a number of conditions have been shown to increase the psychological distress of incarceration, there are also a number of conditions that may mitigate that distress or even enhance the well-being of an individual. As mentioned above, contact

with friends and family may prevent psychological distress. Involvement in prison programs may also be important because those involved in prison programs have more control over their environment and activities and thus a better attitude toward their lives (Wooldredge 1999).

Poehlman (2005) examined the children of incarcerated mothers specifically. She interviewed incarcerated women who were mothers of young children (ages 2 to 7). Her qualitative findings demonstrate that mothers often experience intense psychological distress (i.e., depression and/or suicidal thoughts and actions). However, psychological problems were mitigated by frequent contact with children, particularly in the form of in-person prison visits.

In a study of male prisoners in Chicago who were interviewed before and after their incarceration, La Vigne, Naser, Brooks, and Castro (2005) found that those prisoners who had more contact with family members during their incarceration generally reported greater levels of relationship quality and support. The prevalence and frequency of visits from intimate partners was associated with greater levels relationship quality and support. However, the prevalence and frequency of visits from children and the prevalence of mail and phone calls did not affect overall family relationship quality and support. Furthermore, inmates who received at least one in-person visit and/or piece of mail or telephone call reported higher levels of attachment to their children after release, even when controlling for pre-incarceration attachment. The frequency of phone calls and mail from children also displayed an association with child attachment.

Effects of Parental Incarceration on Children and Families

A wide-ranging and relatively recent body of literature has examined the effects of incarceration on the children and families of parents who are incarcerated. Here, I first review the effects of parental incarceration on psychological distress and antisocial and offending behavior. Then, I review the effects of parental incarceration on family economic hardship, individual educational outcomes, and multiple measures of social mobility and exclusion. The results of these studies show generally deleterious effects of parental incarceration on all these types of outcomes. However, more research is needed to examine the extent of these effects and the mechanisms through which they occur.

Effects on Psychological Distress and Antisocial and Delinquent Behavior

A large portion of the literature on the effects of parental criminal justice contact has examined the role it plays in shaping children's emotionality, psychological development, and criminal trajectories. While some studies focus on either psychological effects or behavioral effects of parental incarceration, most studies examine some combination of the two. Many studies also examine the reciprocal and mediating effects of both psychological and behavioral responses to parental incarceration. A recent and comprehensive meta-analysis revealed that parental incarceration generally increases the likelihood of psychological distress, antisocial behavior, and offending. However, there is not complete consensus in the empirical literature regarding the extent of these effects, nor is there consensus regarding whether the effects of parental incarceration exist independent of other social disadvantages that children of incarcerated parents might be more likely to experience. Many studies do show a unique effect of parental incarceration, but others do not. Many studies also show that the effects of parental

incarceration are mediated and moderated by other situational contexts. Combined, these studies illustrate the varied and complex ways parental incarceration can affect children's psychological state and behavior (Murray, Farrington, and Sekol 2012).

A handful of studies spread across the 1960s, 1970s, and 1980s demonstrated that parental incarceration has significant positive effects on psychological distress and antisocial behavior. However, much of this research utilized small samples. For example, Sack (1977) examined only six families with incarcerated fathers to conclude that parental incarceration increased child behavior problems and that contact with incarcerated fathers helped reduce these effects. Moerk (1973) used analyses of a sample of 48 males to conclude that parental absence due to incarceration did lead to internalizing and externalizing behavioral problems, but that these effects were not greater than the effects of parental absence due to divorce. Fritsch and Burkhead (1981) examined 91 inmates in a federal prison and found that all parents reported high levels of problem behaviors among their children, but fathers were more likely to report externalizing problem behaviors among their children, and mothers were more likely to report internalizing problem behaviors among their children. Finally, Lowenstein (1986) interviewed 118 wives of male prisoners in Israel and found that these women reported high levels of both emotional problems (e.g., withdrawal) and behavioral problems (e.g., academic problems, aggression, and disciplinary problems) among their children after their fathers' incarceration. However, the likelihood of children experiencing these problems was mitigated by mothers' high levels of family resources (e.g., marriage quality and family solidarity), education, coping ability, and social network support. Children of fathers who had been incarcerated for white-collar and moral offenses were

more likely to experience emotional and behavioral problems. The authors suggest this may be due to increased levels of stigmatization that results from these offenses.

A new wave of research on the psychological and behavioral effects of incarceration started in the 2000s has grown exponentially in the 2010s. This wave of research primarily includes analyses of longitudinal data from large, representative samples. Using this type of data allows for better determinations of causality and the analysis of mediating and moderating factors.

One of the first studies in this new wave of research was conducted by Phillips et al. (2002) who interviewed adolescents who were receiving mental health services and compared the effects of parental incarceration on emotional and behavioral problems to the effects of other negative life experiences. They also compared adolescents who had experienced parental incarceration to those who had not. Close to half of their sample had experienced parental incarceration, and the respondents in this half were more likely to experience physical and sexual abuse and neglect, poverty, parental substance abuse, criminal justice system involvement, and school suspension/expulsion. On average, they also experienced a higher number of total risk factors, witnessed more violence, and had more family crises. They also had more problems with role performance (e.g., following rules and getting along with teachers). With regard to their own emotional and behavioral problems, respondents with a history of parental incarceration were more likely to have been diagnosed with conduct disorder or attention-deficit/hyperactivity disorder when they first started their mental health treatment. However, they were less likely to experience major depression. While the differences in diagnoses between children with incarcerated parents and those without incarcerated parents disappeared

after six months of treatment, significant differences in functioning emerged. Children with incarcerated parents experienced significantly more problems in functioning than their counterparts. Thus, parental incarceration may hinder the effectiveness of efforts to improve social functioning. Regression analyses also confirmed this finding. Parental incarceration did not significantly predict emotional and behavioral problems at intake (net of other risk factors), but it did predict emotional and behavioral problems at the six-month follow-up.

Trice and Brewster (2004) examined school suspensions, school absences, class failures, school disciplinary problems, home disciplinary problems, and arrests in a sample of adolescent children of incarcerated mothers and their best friends (who did not have a parent incarcerated). Children of incarcerated mothers were more likely to have experienced each one of these outcomes when compared to their best friends. However, children of incarcerated mothers who had been placed with family members or friends were less likely to drop out of school and have home disciplinary problems. Those who had regular contact with their mother were less likely to drop out of school, be suspended, and have home disciplinary problems, but were not significantly less likely to be arrested. Thus, placement of children in foster homes and restricting contact with incarcerated mothers may exacerbate the effects of parental incarceration.

Wilbur et al. (2007) examined the effects of paternal incarceration on depression and teacher and parent-assessed internalizing and externalizing behavior problem in a small sample of children in low-income, urban households. They found that children with fathers who had been incarcerated in recent years displayed higher levels of depression and externalizing behavioral problems (as assessed by both parents and

teachers) even when controlling for other biological, psychological, and social risk factors such as mother's prenatal drug and alcohol exposure and violence exposure.

Huebner and Gustafson (2007) examined the effects of maternal incarceration on adult criminal behavior and the correlates of criminal behavior among participants in the National Longitudinal Survey of Youth: Child and Young Adult Sample. This sample included the offspring of mothers who participated in the original NLSY sample just after they had entered adulthood. Their results do show an intergenerational pattern in criminal justice system involvement such that participants who were children of mothers who had been incarcerated during their childhood were more likely to report being convicted as adults and/or serving on probation as adults. Maternal absence for other reasons was also a significant predictor of conviction and probation, but the effects of maternal incarceration were about twice as great in magnitude. Maternal incarceration exerted a significant negative effect on parental supervision, but exerted no significant effects on juvenile delinquency, home environment factors, or peer pressure. These findings demonstrate that the linkage between parental incarceration and offending is clear, but the mechanisms through which this link is formed are not.

Kinner, Ataki, Najman, and Williams (2007) examined the effects of paternal incarceration on internalizing behavior problems, externalizing behavior problems, and alcohol and tobacco use in an Australian sample of 14-year-olds. Their analyses used self-report data from both the adolescents and their mothers. They examined the effects of paternal arrest alone and paternal arrest and incarceration. While paternal incarceration had a significant and positive relationship with all of the problem behaviors under consideration, the relationships became non-significant when other indicators of

disadvantage and risk were controlled for. The authors' finding that boys were more likely to exhibit externalizing problems and girls were more likely to exhibit internalizing problems when they experienced parental incarceration also became non-significant when they included other risk factors included in the analyses. Thus, the results from this study do not fall in line with others that find that parental incarceration has an independent effect on antisocial behavior.

Building upon the work of Uggen et al. (2006), Hagan and Palloni (1990), and others who assert that current penal policies may be helping to create class-like structures through labeling, deprivation of resources, unemployment, political disenfranchisement, and the creation of cumulative deprivation, Roettger (2007) also investigated intergenerational linkages between incarceration and antisocial behavior. For Roettger, the primary outcome of interest was offending, not socioeconomic status (although the two may be linked). He examined the degree to which a felon class exists in the U.S. by testing for links between paternal incarceration (among biological fathers) and multiple measures of offending among male respondents to the National Longitudinal Study of Adolescent Health (Add Health) when they were young adults (age 18 to 24). He found that paternal incarceration increased the likelihood of self-reported delinquency by 62 percent and the likelihood of arrest as an adult by 92 percent. Paternal incarceration also increased the probability of drug use and dropping out of high school, which then increased the probability of offending. He concluded that these intergenerational linkages provide evidence that a class-like system is formed through criminal behavior. However, Roettger only examined the linkages between paternal incarceration and

offending. He did not fully examine how paternal incarceration, offending, and socioeconomic class may be linked.

In a follow-up to Roettger's 2007 study, Roettger and Swisher (2011) investigated the possibility that the effects of incarceration on delinquency varied by race. They found that although their nationally representative data showed that having a father incarcerated had a significant positive effect on delinquency, there was little variation in those effects between whites, African Americans, and Hispanic males. Like many other researchers in this area, they called for more investigation into the processes through which parental incarceration may affect delinquency.

Using the Panel Study on Income Dynamics (PSID), an intergenerational, nationally-representative, and longitudinal data set, Johnson (2009) also examined the effects of parental incarceration on both behavior and family economics. The PSID began collecting data in 1968 and includes the children and grandchildren of its original sample. At each wave since 1997, PSID asked respondents to indicate if their parents were currently incarcerated. Johnson used these data to examine the predictors of parental incarceration as well as the potential effects of parental incarceration. Regarding the predictors of parental incarceration, he found that black children had a higher cumulative risk of experiencing parental incarceration than white children. Children of parents with lower levels of education were also more likely to experience parental incarceration. Johnson found that families of children in the study who experienced a father's incarceration experienced significant reductions in income and increases in financial need and likelihood of poverty. Both maternal and paternal incarceration history also had a significant positive effect on internalizing problems (i.e., sadness and

withdrawal), externalizing problems (i.e., anger and aggression), and likelihood of school expulsion, but maternal incarceration was most influential. Parental incarceration (whether maternal or paternal) was also more influential when it occurred either very early in childhood (ages 0 to 5) or during the adolescent years (ages 11 to 16). The results from this study suggest that incarceration may be a mechanism of intergenerational transmission of both criminal behavior and economic inequality.

Wildeman (2010) also examined the effects of paternal incarceration on antisocial behavior using data from the Fragile Families and Child Wellbeing Study (FFCWS). He used outcome measures that were observed when the children in this study were 60 months old. He also examined whether the effects of paternal incarceration varied by gender, offense type, and history of abusive behavior and examined the potentially mediating effects of strain stigma in the paternal incarceration-aggression relationship. His results showed that about 40 percent of the sample had experienced paternal incarceration before they were 30 months and about 20 percent of the sample had experienced paternal incarceration between 30 and 60 months. His results also demonstrate that parental incarceration had a robust and significant positive effect on physical aggression for males, but a weak and negative effect on physical aggression for females. Strain and social stigma did not mediate the relationship between parental incarceration and aggression. However, offense type did appear to moderate the relationship between paternal incarceration and aggression. Boys who were children of fathers who had been incarcerated for nonviolent offenses were more likely to be aggressive than boys who were children of fathers who had incarcerated for violent offenses. Furthermore, the positive effects of paternal incarceration on aggression were

much smaller when the father had been abusive to the child's mother. This suggests that the effects of parental incarceration may depend greatly on certain characteristics of the parent. In this case it was the violent nature of the parent.

Joseph Murray, David Farrington, and their colleagues have examined the effects of parental incarceration on a number of different outcomes using data from the United States and Europe. First, Murray and Farrington (2005) examined the effects of parental incarceration using data from the Cambridge Study in Delinquent Development (CSDD), a longitudinal study of boys in South London. In this study, they examined the overall effects of parental incarceration on several different measures of antisocial behavior including self-reported violence, self-reported offending, "poor life success" (a scale that included indicators of unemployment, cohabitation, and divorce), criminal convictions, and imprisonment. They also compared parental incarceration to other forms of parental separation and examined whether the effects of parental incarceration varied by the timing of incarceration. Due to the longitudinal nature of the CSDD, they were also able to compare the effects of parental incarceration at several different points from when the participants between the ages of 14 and 40. They found that parental incarceration was a strong predictor of all of their measures of anti-social behavior. While the effects of parental incarceration were strongest during the adolescent and early adult years, they also persisted until age 40. Furthermore, parental incarceration was a stronger predictor of anti-social behavior than other forms of parental separation such as hospitalization, death, or divorce. The timing of parental incarceration was important in predicting antisocial behavior. Children whose parents were incarcerated when they were age 10 reported more anti-social behavior than children whose parents were incarcerated before

they were born. This finding supports the assertion that the intergenerational linkage in anti-social behavior is not purely genetic.

In a follow-up to their 2005 study, Murray and Farrington (2008) examined the effects of parental incarceration on internalizing problems, anti-social behavior, and their co-occurrence using data from the CSDD. In this study, they examined the long-term effects of parental incarceration on anxiety, neuroticism, and antisocial personality disorder. Again, they made comparisons between several groups of respondents. They found that boys who experienced parental incarceration during childhood were more likely to experience internalizing problems (i.e., anxiety and neuroticism) and more likely to experience them chronically throughout their life course when compared to boys who had experienced no separation from their parents, boys who had been separated from their parents for other reasons (e.g., death, or hospitalization), and boys whose parents were incarcerated before they were born. The authors concluded that parental incarceration during childhood may have led to worse internalizing problems than other forms of parental separation may be because it is more traumatic. While other risk factors slightly mediated the relationship between parental incarceration and internalizing problems, parental incarceration still remained as an independent predictor of internalizing problems when these risk factors were controlled for. Furthermore, parental incarceration during childhood was also associated with the co-occurrence of antisocial personality disorder and internalizing problems. However, anti-social personality disorder did not mediate the relationship between parental incarceration and the traumatic nature of the parental separation. Taken together, the results from this study suggest that parental incarceration increases the likelihood of internalizing problems and antisocial

behavior independent of other risk factors and it does so because of the traumatic nature of this form of parent-child separation. However, more work needs to be done in order to examine the mechanism through which parental incarceration leads to these outcomes.

In another follow-up study, Farrington, Coid, and Murray (2009) examined the transmission of offending in three generations using the parents and children of the boys who were included in the initial CSDD sample. While they used convictions (not incarceration) to test for these linkages, they did find consistent parent to child connections in criminal justice system involvement. However, they did not find significant connections between grandparents and grandchildren in criminal justice system involvement, except for grandmothers and granddaughters. Also, criminal justice system involvement seemed to have a greater effect when the parent was the same gender as the child. All of these effects were mediated by other family, socio-economic, and individual-level risk factors, suggesting that parental criminal justice system involvement may have less deleterious effects when these risk factors are not present.

Murray, Janson, and Farrington (2007) also examined the effects of parental incarceration on offending using data from Project Metropolitan, a longitudinal study of a birth cohort (1953) in Sweden. In this study, they compared the effects of parental incarceration during early childhood (i.e., between birth and age 6) and later childhood-adolescence (i.e., between ages 7 and 18). They found that parental incarceration during early childhood had a significant effect on the likelihood of adult conviction for both males and females. The effects for females were much greater than the effects for males. Conversely, parental incarceration during late childhood-adolescence, while significant for both males and females, had a much more significant effect on conviction likelihood

among males. However, when the number of parental criminal convictions and social class were included in the models, and when children whose parents were incarcerated during childhood were compared to children whose parents who had been incarcerated before they were born, the effects of parental incarceration diminished significantly.

Rakt, Murray, and Nieuwbeerta (2012) combined data from a national survey of convicted men in the Netherlands and official records for their children to examine the relationship between paternal incarceration and offending. They investigated the role of timing, duration, and frequency of paternal incarceration in this relationship. They found that the timing of paternal incarceration did not affect the shape of the typical age-crime curve seen in criminological research where crime peaks in late adolescence and the declines afterward, but it did affect the height of the curve. Children whose fathers were incarcerated before they were age 12 had higher average rates of conviction in adulthood than did children whose parents were incarcerated later in life or before they were born. Children whose fathers were incarcerated for longer periods of time also had only slightly more convictions throughout the course of the study when other variables were controlled for. The authors suggested that long-term incarceration actually protects children because it often removes a source of criminal learning for children. Finally, consistent with previous research, paternal imprisonment had a slightly greater effect on girls than boys.

Finally, Murray, Loeber, and Pardini (2012) tested several different theoretical explanations of the relationship between parental arrest, conviction, and incarceration on theft, marijuana use, depression and academic performance using data from the Pittsburgh Youth Study (PYS). They found that, among the boys included the PYS,

parental arrest and conviction without incarceration had null effects on all of their outcome measures. However, parental incarceration did exert a significant positive effect on involvement in theft. The effects of parental incarceration on theft were greater among whites than among blacks. Further, caretaker stress and peer delinquency mediated much of the effects of parental incarceration on delinquency.

Effects of Parental Incarceration on Family Economic Hardship, Education Outcomes, and Social Mobility

Social scientists have also begun to examine the effects of parental incarceration on the economic hardship faced by families as well as the economic and educational outcomes of children. Most studies in this area of research show that incarceration places a heavy economic burden on families and that the stigma of incarceration is transmitted to children, thereby reducing their educational and economic life chances.

Family Economic Hardship

In one of the first studies of the family-level economic effects of parental incarceration, Naser and Visser (2006) interviewed various family members of male prisoners who were being released in Chicago. They found that about one-third of these family members identified serious financial difficulties as the result of their family member's incarceration and many more identified specific hardships such as the costs of visitation and phone calls. They also identified worries that they had for their family member after release (e.g., that they would not be able to find a job). However, social support and connections seemed to help alleviate worries for some family members.

Geller, Garfinkel, and Western (2008) used data from the FFCWS to examine differences in financial contributions of fathers with and without a history of

incarceration. They found that fathers with a history of incarceration were not only less likely to contribute to their families, but also, if they did contribute, they contributed less. This is because previously incarcerated fathers faced difficulty in the labor market and because they lived farther away from their children.

Geller et al. (2009) examined the effects of parental incarceration on family economic hardship, physical health, behavior and emotional problems, and cognitive development using data from FFCWS. Using data from the three-year follow-up in this study, they found that children in families where one or both parents had been incarcerated experienced higher levels of economic disadvantage and residential instability. Father's incarceration history was related to higher likelihood of unemployment, fewer weeks worked in the past year, lower hourly and yearly wages, lower contributions to the family's finances, greater likelihood of receiving public assistance, and more moves in the past three years. Mother's incarceration history was only associated with residential instability and public assistance receipt. For the most part, parents' incarceration history was not significantly associated with physical health, cognitive development, or emotional problems. However, children of fathers with an incarceration history did display moderately higher levels of aggression. This study demonstrates that, although the effects of parental incarceration might not manifest themselves in behavioral or emotional problems at this early age, they may be setting the stage for future problems by increasing levels of economic disadvantage.

Schwartz-Soicher, Geller, and Garfinkel (2011) also used data from the Fragile Families and Child Wellbeing Study to examine the effects of paternal incarceration on poverty status and material hardship at the family level. They found that families with

fathers who had experienced incarceration had incomes that were lower (relative to the poverty threshold for their family size) and were more likely to experience material hardship as measured by mothers' reports of their inability to pay rent, utility bills, and other expenses. These effects were found even when controlling for fathers' post-conviction incomes, suggesting that a father's incarceration causes economic problems for families not just by reducing his ability to find employment in a high wage job, "but also by increasing the financial burden on families or compromising mothers' ability to manage household resources" (Schwartz-Soicher et al. 2011:14). The effects of paternal incarceration in this study, however, were found only among those families where the father was involved in children's lives since birth.

Educational Outcomes

A handful of researchers have begun to examine the specific effects of parental incarceration on educational outcomes as well. Cho (2009a, 2009b) used public school records for students in Chicago to examine the effects of maternal incarceration on the likelihood of grade retention and changes in test scores. Cho found that maternal incarceration actually reduced the likelihood of grade retention and had null effects on test scores. She suggested that this may be because, compared to the mother before her incarceration, alternative caregivers became more involved in the student's schooling. She also linked her findings to the possibility that children's often living arrangements improve after maternal incarceration.

Haskins (2011) examined the effects of father's incarceration on the behavioral and cognitive school readiness of five-year old children who were included in the Fragile Families and Child Wellbeing Study. She found that parental incarceration decreased

behavioral school readiness (which she measured through maternal assessments of children's internalizing problems, externalizing problems, and hyperactivity), but had null effects on cognitive school readiness (which she measured through maternal assessments of their children's ability to concentrate, cooperate, interact with others, and understand the consequences of their behavior).

Hagan and Foster (2012a) used Add Health data to examine the effects of parental incarceration on educational outcomes at the school and individual levels. They argued that the negative effects of parental incarceration on children of incarcerated parents can spill over to other students. Because Add Health employs a cluster sampling design with schools as the primary sampling unit, they were able to examine the effects of both maternal and paternal incarceration rates on educational outcomes. In this study, they used high school grade point averages (GPA) and college graduation rates. They were also able to compare these effects to individual-level effects of maternal and paternal incarceration. Their results showed that only maternal incarceration rates had a significant negative effect on average high school GPAs. Both maternal and paternal incarceration had significant negative effects on college graduation rates. At the individual level, maternal incarceration had a significant negative effect on GPA and college graduation. Paternal incarceration had a significant negative effect on college graduation only. It appears that maternal incarceration has a more profound impact than paternal incarceration on children's educational outcomes at both the individual and aggregate levels. Hagan and Foster argued that these findings, combined with much faster growth rates in female incarceration, suggest that a "prison generation" may be forming in the U.S.

In a separate follow-up study, Hagan and Foster (2012b) used hierarchical-linear modeling to examine the mediating effects of residential mobility, stigmatization, and economic and educational resources, as well as the moderating effects of neighborhood characteristics, in the relationship between paternal incarceration and educational outcomes. Again, they found that respondents who went to schools with higher proportions of fathers who were incarcerated had lower GPAs, were less likely to have completed a college degree, and had lower overall levels of education. These effects appear to remain even after controlling for several individual level, school level, and neighborhood level mediating and moderating variables.

Social Mobility

Using data from Add Health, Foster and Hagan (2007) examined the effects of father's incarceration on three types of social exclusion (i.e., homelessness, lack of health insurance, and political disengagement) resulting from parental incarceration. They found that young adults with a father who was incarcerated during their childhood were significantly more likely to be homeless, uninsured, and politically disengaged. Further, low paternal education and the interaction between low paternal education and incarceration were also found to be positively associated with these outcomes. Using the cumulative disadvantage framework, they also hypothesized that paternal incarceration not only has a direct effect on these outcomes, but also operates *through* "educational detainment" (i.e., the lack of educational advancement) in combination with a number of other social disadvantages (which may also be affected by both maternal and paternal incarceration). In other words, paternal incarceration hinders educational progression which then increases social exclusion. This effect is then compounded by other social

problems. Their empirical findings indeed show that parental incarceration limited educational development which then, in conjunction with other disadvantages such as low family income and parental neglect, increased social exclusion. Foster and Hagan also argued that the same divisions down racial and ethnic lines that are created intragenerationally through incarceration are likely to be reproduced through disproportionate intergenerational social exclusion.

Wildeman (2009) examined the potential intergenerational effects of parental incarceration by comparing the risks of having a parent imprisoned for two age cohorts—children born in 1978 and children born in 1990. In addition to providing the overall risks of incarceration (discussed earlier), Wildeman also compared risks for white and black children and children of parents with various levels of education. By disaggregating risks by both race and parent education, he was able to uncover even greater inequality in parental incarceration. Also, by comparing two age cohorts, he was able to uncover growth patterns in racial and class inequality in parental incarceration. Wildeman found that although racial disparities in incarceration rates have not grown during the incarceration boom, racial disparities in parental incarceration have increased. He attributes these seemingly contradictory findings to racial differences in demographic changes during the incarceration boom. He points out that the mean age of parents grew at a faster rate for whites during the incarceration boom. Likewise, marriage rates fell at a slower rate for whites. Wildeman also found that parental incarceration rates increased as parent educational attainment decreased for both white and black children and in both birth cohorts. However, differences in parental incarceration by parent education were slightly greater among white children. Class inequality (measured by educational

disparities) in parental incarceration grew between the two birth cohorts for whites. Nevertheless, because incarceration rates and parental incarceration rates are both drastically higher for blacks and their educational attainment is lower on average, the incarceration boom has disproportionately affected black children. Wildeman suggests that this concentration of parental incarceration by race and social class may be helping to reproduce and exacerbate social inequality.

CHAPTER III

CONCEPTUAL FRAMEWORK

There are several ways in which parental incarceration may affect socioeconomic outcomes. In this section, I review the theoretical perspectives that help explain these mechanisms and then connect them to the current study. I have divided this chapter into two sections. First, in the theoretical framework section, I begin by reviewing Weberian notions of class and class formation and then apply those concepts to parental incarceration. I also connect the Weberian perspective to more recent explanations of how incarceration, specifically parental incarceration, generates social closure and helps form social classes. I then explain how these mechanisms are likely to differ by race, ethnicity, and gender. In the conceptual models and hypotheses section, I begin by presenting the general analytical framework that I use in this study and the general conceptual models that I test using that framework. Next, I deconstruct my conceptual model and explain the direct, moderating, and mediating effects I expect to find. I also provide several specific hypotheses regarding the relationship between parental incarceration and mechanisms of social closure, status attainment, and mobility.

Theoretical Framework

Weberian Notions of Social Class

Given its complexity and insightfulness, Max Weber's work on class and status differentiation has been the subject of much writing and debate in sociological theory.

He has attempted to critique and expand upon the historical materialism inherent in Marxist models of class, which many have criticized as being overly simplistic and deterministic. Weber began this movement by providing a more nuanced model of class that included both economic and social influences in determining class position as well as distinctions between classes, status groups and political parties. Post-Weberian scholars have expanded upon, clarified, and critiqued Weber's model, mainly by describing the process of social closure in more detail.

In *Class, Status, and Party*, Weber (1946) explained that power is distributed across three realm (i.e., the economic realm, the social realm, and the political realm) and that power in one realm is almost always dependent upon and a causal influence upon the ability to attain and maintain power in the other two realms. Thus, these three dimensions of power are inherently intertwined. Weber also explains that social class is not dependent solely upon control of the mode of production or any other economic factor, but on “common specific causal components of their life chances,” (1946:181) in the ability to access resources that can be used to consume goods and skills and attain power in other realms. As Giddens (1973) put it, “a social class, in Weber's sense, is formed of a cluster of class situations that are linked together by virtue of the fact that they involve common mobility chances, either within the career of individuals or across generations” (p. 47–48). So then, class refers not only to groupings of people with common positions in the market, but also groupings of people with common abilities (or inabilities) to change their position in the market.

Weber also recognized that market situations and mobility chances are not distributed equally so that certain groups of people have more market power and thus are

in higher classes than others. However, he also recognized that this stratification does not exist on its own nor is it based only on exploitation and ownership of property. Rather, it is influenced by other non-economic factors such as status group membership as well. Status refers to the honor or prestige given to a person's social location. Status groups consist of individuals with common levels and types of honor and prestige. As Weber states:

In contrast to classes, status groups are normally communities. They are, however, often of an amorphous kind. In contrast to purely economically determined 'class situation' we wish to designate 'status situation' every typical component of life fate of men that is determined by a specific, positive or negative, social estimation of honor. This honor may be connected with any quality shared by a plurality, and, of course it can be knit to a class situation: class situations are linked in the most varied ways with status distinctions (1946:186–7).

Weber acknowledges the possibility of antagonistic economic classes, but argues that economic class is not determined by ownership of the means of production alone, but by the acknowledgment and action upon common positions in the market and common life chances. Weber also expands the term "social class" to include several different types of social groupings, not just those of an economic nature. By differentiating between economic classes and social classes, Weber shows us that common positions outside of those related to the mode of production can affect an individual's overall social status and that economic classes and other social groupings can work together and against each other in the struggle to maintain power.

Weber argues that although status groups may exist somewhat independent of economic classes, these two groupings have great reciprocal influences on each other as well. He claims that status group membership indirectly affects the distribution of market power through the process of social closure in which market power is withheld for some at the exclusion of others based on their membership in different status groups and that status group membership is often determined by markers of one's position in the economic class hierarchy.

Weberian and Post-Weberian Notions of Social Closure

Weber and post-Weberians argue that the primary process through which classes and status group differentiations are formed and maintained is the process of social closure. In this process, individuals or groups seek to maintain their power by either excluding others from accessing resources and opportunities or by siphoning resources and opportunities off from others. Social closure is the general process through which classes are formed and social exclusion is the specific mechanism through which social closure occurs. The exclusion of others from resources and opportunities is often based upon one or more easily identifiable characteristics. As Weber points out, "when the number of competitors increases in relation to the profit span, the participants become interested in curbing competition. Usually one group of competitors takes some externally identifiable characteristic of another group of (actual or potential) competitors—race, language, religion...etc.—as a pretext for attempting their exclusion. ...Its purpose is always the closure of social and economic opportunities to outsiders" (Weber 1978[1922]:342). Here, Weber argues that individuals prevent competition for resources by limiting other individuals' access to those resources based on some easily

identifiable characteristic. Who is excluded and who is not is often determined by individuals' status group membership.

Many theorists have expanded upon Weber's original conceptualization of social closure by describing more forms of social exclusion and by better explaining how social closure accounts for the (reciprocal) relationship between economic and social classes. Parkin (1979), for example, redefines social closure as "the process by which social collectivities seek to maximize rewards by restricting access to resources and opportunities to a limited circle of eligibles" (p. 165). He explains that the basis for who is 'eligible' can be determined by a number of different factors, but the goal of closure is generally the monopolization of economic power. He also adds legal codes and credentialism as two major mechanisms of social exclusion. Legal codes, according to Parkin, are created by those with power to help them maintain it and accumulate more. Requirements for credentials to access economic and social goods are also often created by and for the benefit of those with power. Parkin says that credentialism is a particularly effective method of social closure, because it simplifies the exclusionary process by making it calculable and rational and on the surface it's calculability and rational nature makes it seem legitimate to those who are excluded.

Manza (1992) adds to the understanding of social closure by stating that social exclusion can also occur informally and that social closure can occur both between and with classes. While Manza says that formal modes of social exclusion such as credentialism and legal protection of property rights are important, he also argues that there are also informal modes of social exclusion in which the denial of opportunities and resources are not codified, but still practiced. Manza also says that individuals within the

same economic class can exclude other members of their economic class from attaining economic and social resources just as individuals within a status group can exclude other members their status group from attaining economic and social resources. Thus, economic classes and status groups have a much more complex interplay than even Weber imagined.

Incarceration and Weberian Notions of Class and Social Closure

Weberian notions of class and closure can help explain the effects of incarceration on social class and mobility. First, those who are incarcerated and/or have a history of incarceration can be considered a status group in the Weberian sense. Membership in this status group can affect economic outcomes and vice versa. Having a history of incarceration limits an individuals' market power and often keeps an individual from advancing intragenerationally into a higher class. While the markers of prior incarceration are not physical (aside from maybe tattoos), prior incarceration is also a somewhat easily recognizable status that can and is used as a basis for social exclusion. The formal and informal mark of prior incarceration is often used to exclude individuals from obtaining economic social goods. Often times, this social exclusion is even legally mandated. Criminal background checks often accompany employment applications, public assistance applications, and housing applications and individuals with a felon record are often prohibited from being employed in certain occupations, receiving certain forms of public aid, obtaining certain types of housing, and voting. These requirements can be seen as a form of credentialism that is used for exclusionary social closure. As Manza (1992) would argue, prior incarceration can also carry an informal stigma that can

be used as a basis for exclusionary social closure and this process of closure can occur both between and within social classes.

Weberian theory can also be used to explain the effects of parental incarceration on social class and mobility. First, as Weber and his followers argue, the social closure processes can occur both intragenerationally and intergenerationally. I argue that social closure, as it pertains to incarceration, can occur both intragenerationally and intergenerationally, as well. Bendix (1989) points out, “[According to Weber], status groups are rooted in family experience. Before the individual reaches maturity, he has participated in his family's claim to social prestige, its occupational subculture and educational level” (p. 153). Thus, the social prestige (or lack thereof) of parental incarceration may be transferred to incarcerated parents’ children and place them in a status group that is excluded from attaining social and economic resources. Also, the stigma placed on a child’s non-incarcerated parent may also lead to the early social exclusion of a child.

Second, parental incarceration is often linked to poor academic performance which, through credentialism, helps exclude individuals from attaining economic and social resources. Also, the negative economic effects of parental incarceration may cause individuals to enter the labor market early rather than pursuing higher education, which may ultimately limit life chances.

Third, the decreased market power of parents who are or have been incarcerated hinders them from aiding their children, even if they would only have helped only in minimal ways, to prepare them for the labor market. Fourth, the political disenfranchisement that is often associated with incarceration leads to a loss of political

power at the macro-level that can also indirectly reduce the life chances of parents who have been incarcerated and their children. Fifth, individuals who experience incarceration and/or parental incarceration are often members of other stigmatized status groups and disadvantaged economic classes before incarceration. Incarceration may compound the effects of membership in these groups. Finally, because it is closely linked to children's offending and incarceration, parental incarceration may limit children's life chances by making it more likely that they themselves will have contact with the criminal justice system and be placed in a stigmatized status group of offenders.

As discussed above, Bruce Western and other researchers have shown that incarceration indeed increases social closure by reducing the market capacities and thus the mobility chances of those who are incarcerated (e.g., Western 2002, 2002, 2007; Western and Pettit 2005; Wakefield and Uggen 2010; Pager 2003; Kling 2006). Other researchers have shown that these effects may extend to inmates' children as well (e.g., Foster and Hagan 2007; Geller et al. 2009; Haskins 2011). Based on these findings, I argue that incarceration may be a major force that contributes to class structuration in the U.S. because incarceration diminishes the life chances of inmates and their children. As Giddens (1982) points out, class can be indicated by both an individual's life chances and by the total amount of mobility with in a society. While I cannot directly examine the latter in this study, I can examine the effects of parental incarceration on individual life chances and compare the degrees of mobility between individuals who have experienced parental incarceration and individuals who have not experienced parental incarceration. I expect that parental incarceration will limit individuals' life chances and reduce

intragenerational and intergenerational social mobility. In the next section, I explain in more detail the mechanisms through which I expect this to occur.

Mechanisms of Social Exclusion

The stratification literature has identified several specific mechanisms through which social exclusion may occur. These mechanisms reduce individuals' life chances and help close social class boundaries. A smaller portion of that literature has examined how parental incarceration may operate as one of these mechanisms. I have combined the works of Murray, Janson, and Farrington (2007), Roettger (2007), Roettger (2009), and Foster and Hagan (2007) to create a six-part typology of the mechanisms of social exclusion that may occur as the result of parental incarceration.

Stigmatization

According to Goffman (1963), stigma refers to social stigma as “blemishes of individual character perceived as weak, domineering or unnatural passions, treacherous and rigid beliefs, and dishonesty” (p. 14) and uses imprisonment as an example of one of the mechanisms through which stigma is placed on individuals. He also explains that stigma can be transferred intergenerationally. Evidence that formal and informal stigma is placed on individuals with a history of incarceration is abundant throughout research employing survey, experimental, and qualitative methodology. Very few studies, however, have examined exactly if and how stigmatization associated with incarceration mediates the relationship between incarceration and other outcomes.

Parental incarceration also seems to have a stigmatizing effect. As Comfort (2008) asserts, individuals who experience incarceration are treated as “social isolates”

and the family members that are close to them are “legal bystanders” that experience the same type of stigmatization. Many empirical studies show that children of incarcerated parents are often stigmatized by their peers through teasing, bullying, labeling, and verbal abuse and that such stigmatization may increase the likelihood of antisocial behavior, emotional problems, academic problems, and economic problems (Murray et al. 2007; Rodriguez, Smith, and Zatz 2009; Boswell and Wedge 2001; Sack 1977; Sack, Seidler, and Thomas 1976; Wakefield and Uggen 2010).

As described above, a large body of theoretical and empirical literature has demonstrated intergenerational connections in offending and criminal justice contact. It is also possible that the intergenerational connections in offending and criminal justice contact may facilitate intergenerational transmission of stigmatization. Roettger (2007) suggests that the intergenerational transmission of offending, criminal justice contact, and stigmatization are connected and are helping to form a felon class in the U.S. He contends that this concept of a felon class is similar, but not identical to traditional notions of class. I contend that the intergenerational class-formation effects of incarceration extend to economic classes as well because stigmatization that results from parental incarceration is expected to reduce mobility chances.

Loss of Capital

The loss of economic, human, and social capital that families face during and after parents are sent to prison is another way that parental incarceration may diminish individuals’ life chances. Economic capital refers to families’ physical and financial resources. Human capital refers to their training, education, and skills. Social capital refers to the social resources available to them that come about from their placement in

various social networks and allow accomplish certain goals. Each type of capital has reciprocal effects on the other (Coleman 1988). As described above, families face loss of income, problems with housing, and stigmatization and exclusion when family members are incarcerated (see Hairston 2007 for review). During incarceration, parents are not able to contribute to their families' economic resources and, after incarceration, parents may face trouble finding employment in (and/or advancing to) higher wage-earning occupations. The loss of economic capital may place an additional burden on children of incarcerated parents, which may then lead to academic problems. Individuals who are incarcerated often also face a loss of social capital and because social capital is often transmitted intergenerationally. The stigmatization that follows incarceration may lead to loss of social capital for children as well. Coleman (1988) points out that social capital is highly important in the accumulation of human capital, particularly in the form of educational attainment.

Cumulative Disadvantage

Several researchers have used the cumulative disadvantage framework to examine how parental incarceration may lead to the social exclusion of children. The concept of cumulative disadvantage has many different meanings and applications throughout the literature. Laub and Sampson (1997) argue in their life course theory of cumulative disadvantage that the experience of social disadvantage has a snowball effect in that disadvantages experienced early in the life course make it more likely that further disadvantage will be experienced and will accumulate faster a later stage of the life course. In their "sequential stress theory of cumulative disadvantage," Hagan and Foster (2003) add that the stress and negative emotions experienced along with disadvantage

may also affect future offending and future disadvantage (and may explain gender differences in offending trajectories). Hannon (2003), Wilson (1990), Collins (2010), and Waquant (2001) add that disadvantage, including disadvantage caused by incarceration, is concentrated among blacks and Latinos and in neighborhoods with a higher percentage of blacks and Latinos (Foster and Hagan 2007).

Parental incarceration may facilitate the accumulation of disadvantage, and thus, may add to the formation and maintenance of social class boundaries. The negative consequences of parental incarceration in a number of different realms that are described above set the stage for the accumulation of further disadvantage. For example, the economic and emotional burdens that parental incarceration often places on children may cause them to have academic problems and may hinder their ability to go to college. Foster and Hagan (2007) suggest that intergenerational and intragenerational educational detainment is the primary mechanism through which parental incarceration leads to social exclusion. They argue that parent educational and parental incarceration have reciprocal effects on each other and that cause educational detainment among children. This educational detainment has a reciprocal relationship with other forms of disadvantage that eventually leads to social and economic exclusion in adulthood. Parental incarceration has also been found to increase the likelihood of other risk factors such as abuse and neglect. These risks factors may facilitate the accumulation of disadvantage.

Disadvantages caused by parental incarceration may also be heaped upon pre-existing disadvantages children and families are facing. Murray et al. (2007) demonstrate that those who are incarcerated are disproportionately poor, have a greater likelihood of mental health problems, are more likely to have had marital problems, and have a greater

likelihood of being victims of abuse and neglect. These same social problems are more prevalent among the families of individuals who are incarcerated, even before they are sent to jail or prison. Thus, families of incarcerated parents are more likely to experience multiple disadvantages before parental incarceration and those disadvantages are likely to be compounded during and after parental incarceration. Conversely, families with a greater amount of economic and social resources may be better able to cope with and mitigate the negative effects of parental incarceration.

Strain and Stress

The effects of parental incarceration can also be examined through the strain or stress perspective. In his general strain theory (GST) of criminal and delinquent behavior, Agnew (1992) argues that negative affective states result from the presentation of a noxious stimuli or the removal of a positively-valued stimuli, and that negative affective states increase the likelihood of criminal or delinquent behavior, especially when other coping resources are not available. Parental incarceration is best categorized as the removal of a positively-valued stimuli (a parent's emotional and/or economic support) and it has been linked to negative emotional outcomes. Of course, the removal of a parent is not always stressful for children. In fact, if the parent is abusive or a financial burden on the family, incarceration can provide relief to a child. However, most research demonstrates that, on average, parental incarceration typically increases the likelihood of emotional problems in children's lives. While I am not using crime as my ultimate outcome as Agnew does in his GST theory of offending, research has shown that negative affective states hinders academic performance and SES outcomes. I present a similar model in which parental incarceration increases the likelihood of negative

affective states (mainly, depressive states), which then have a negative effect on educational and SES outcomes. Thus, negative emotional states will mediate the effects of parental incarceration on educational and SES outcomes.

Intergenerational Transmission of Offending

Parental offending and incarceration have been linked with children's offending and criminal justice contact. The effects of the experience of parental incarceration on offending can even extend into adulthood. Given these findings and the generally negative effects of criminal justice contact on socioeconomic outcomes, I contend that criminal justice system contact will mediate the relationship between parental incarceration and educational and socioeconomic outcomes. By making criminal justice system contact more likely, parental incarceration will also limit individual's chances for educational, occupational, and economic success.

Racial and Ethnic Context

Two alternative hypotheses have been suggested to explain the extent to which the exclusionary effects of parental incarceration might differ by race and ethnicity. First, the double jeopardy hypothesis suggests that individuals who have a history of incarceration (and their children) and are in minority racial or ethnic group hold "multiple marginalized statuses" and that the detrimental effects of the combination of these two statuses is even greater than the sum of detrimental effects of the statuses when held separately (Dowd and Bengston 1978, Jackson 2009). Thus, according to this hypothesis, the effects of parental incarceration would be greater for children who are members of minority racial and ethnic groups, namely black and/or Hispanic children (Haskins 2011).

The resiliency hypothesis suggests that because incarceration rates are so much higher among blacks and Hispanics, and incarceration is a more common life experience among these groups, it is more normalized and therefore less shocking, less stigmatizing, and less stressful (Mineka and Kihlstrom 1978; Osborne and McLanahan 2007). Thus, individuals who are black and/or Hispanic would experience relatively less detrimental effects of incarceration than their white and non-Hispanic counterparts. Likewise, black and/or Hispanic children would also experience less detrimental effects of parental incarceration than their white and non-Hispanic counterparts. There is fairly wide support for the hypothesis regarding one's own experience of incarceration. However, very few studies have examined racial differences in the effects of parental incarceration on children.

Conceptual Model and Hypotheses

In this study, I examine the effects of parental incarceration on intragenerational and intergenerational mobility. I also examine whether and how several factors mediate and/or moderate those effects. In this section, I connect the theoretical and empirical literature reviewed above to the analyses I conducted in the current study. First, I provide a conceptual model that depicts the relationships I examined in this study. I also relate this model to the steps I used to analyze those relationships. Finally, I provide several theoretically and empirically-informed hypotheses that guided my analyses.

Conceptual Model

In Figure 1, I present the full conceptual model of the relationships I examine in my analyses. In this study, I divide my analyses into several steps. The various lines in

this model represent the types of effects I examine and the types of effects I expect to find in my analyses. Below, I explain these types of effects individually and the direction and nature of the effects I expect to find.

Hypotheses

Direct Effects of Parental Incarceration on SES Outcomes

The solid lines in Figure 1 represent direct effects of one variable on another. In this study, I examine the direct effects of parental incarceration on income, occupational prestige, and educational attainment. I hypothesize that the stigmatization, emotional, and economic effects of parental incarceration extend into adulthood. Thus, I hypothesize that both parental incarceration prevalence and duration will exert a negative direct effect on Add Health respondents' SES outcomes (i.e., income, occupational prestige, and educational attainment) even when controlling for parent SES variables.

My specific hypotheses are as follows:

Hypothesis 1a: Parental incarceration will exert significant negative direct effects on income.

Hypothesis 1b: Parental incarceration will exert significant negative direct effects on occupational prestige.

Hypothesis 1c: Parental incarceration will exert significant negative direct effects on educational attainment.

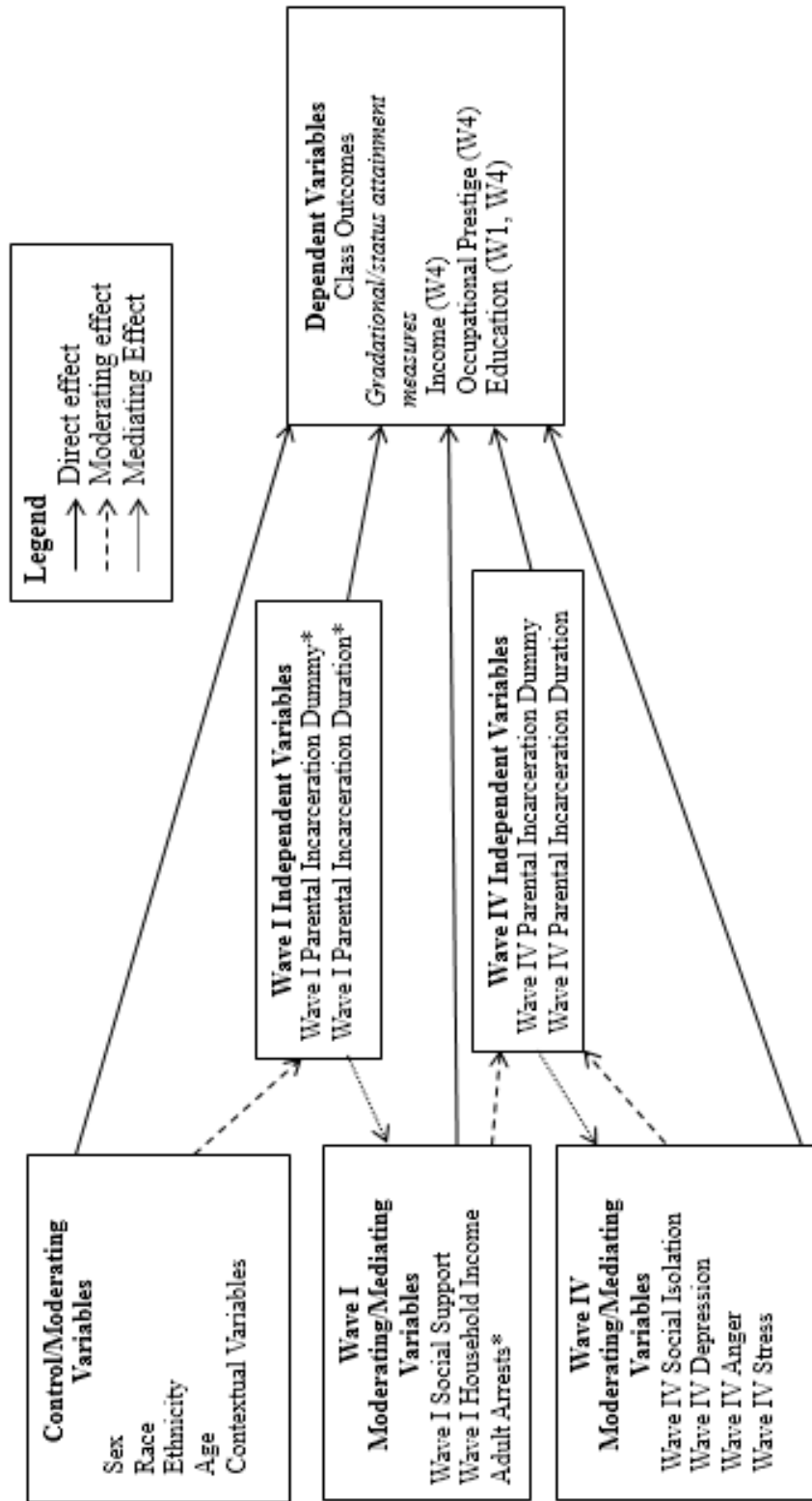


Figure 3.1 Full Conceptual Model

*Childhood parental incarceration variables used in models examining mediating effects of adult arrests

Moderation and Mediation Effects

The dotted lines represent moderating effects that I examine in my analyses. Moderating effects are effects that condition the effects of an independent variable on a dependent variable such that the independent variable has effects that are different in strength or direction at different levels or attributes of the mediating variable. I expect that several variables will condition the effects of parental incarceration on income, occupational prestige, and educational attainment. Many factors such as social support and high parent SES may act as protective factors, whereas factors such as neighborhood disadvantage and social isolation may compound the effects of parental incarceration.

The dashed lines in Figure 1 represent the mediating variables I examine in my analyses. Tests for mediating effects attempt to reveal the mechanism(s) through which an independent variable affects a dependent variable. I also expect that several variables will mediate the effects of parental incarceration on income occupational prestige, and educational attainment. Based on the literature reviewed above, it is probable that parental incarceration leads to social isolation, negative emotions, more contact with the criminal justice system, and early economic disadvantage, which then reduce the likelihood of attaining high levels of income, occupational prestige, and educational attainment.

Social Support

First, I expect that the effects of parental incarceration will be mediated and moderated by respondent's reported level of social support. Parental incarceration may cause children to feel like their parents and family do not care about them, which then might lead to poor academic performance and negative emotions, which may then lead to

diminished SES outcomes. Respondents who report low levels of social support may also lack social capital that could help them in the labor market. Social support is also expected to buffer the negative effects of parental incarceration on SES outcomes. Those respondents who experience parental incarceration but have high levels of social support will be more likely than those with lower levels of social support to overcome the disadvantages caused by parental incarceration. Therefore, I expect that:

Hypothesis 2a: Parental incarceration will exert significant negative direct effects on social support.

Hypothesis 2b: Social support will exert significant positive direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 2c: Social support will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when social support is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 2d: Social support will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of social support, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be lesser in magnitude and significance.

Cumulative Disadvantage and Disadvantage Saturation

There are two complimentary perspectives with regard to the relationship between previous disadvantage, criminal justice contact, and school and class outcomes. The cumulative disadvantage perspective asserts that early disadvantage causes criminal justice contact to have even more deleterious economic effects on individuals. The disadvantage saturation perspective asserts that the economic effects of criminal justice contact would be less severe for disadvantaged individuals because they would have “less to lose” as the result of criminal justice contact. Applying these perspectives to parental

incarceration, the former suggests that disadvantaged children would experience more severe and more harmful economic consequences as the result of parental incarceration than their privileged counterparts. The latter suggests that the absolute value of harm would be less for disadvantaged youth.

I expect that early parental incarceration facilitates a process of cumulative disadvantage. I hypothesize that all parental incarceration variables will exert a significant negative direct on adult income, adult occupational prestige, and adult educational attainment. I also hypothesize that early parental incarceration will exert a significant negative effect on household income during adolescence. In turn, I expect household income during adolescence to exert a positive effect on adult income, adult occupational prestige, and adult educational attainment.

Also in line with the cumulative disadvantage framework, I expect household income during adolescence to moderate the effects parental incarceration on adult income, adult occupational prestige, and adult educational attainment. Specifically, I predict that the negative effects of parental incarceration on adult income, adult occupational prestige, and adult educational attainment will be greater in magnitude and significance at the lowest levels of household income. Similarly, I expect the negative effects of parental incarceration to be greater in magnitude and significance at the lowest levels of parent occupational prestige and parent educational attainment. Thus, I have constructed the following hypotheses:

Hypothesis 3a: Parental incarceration will exert significant negative direct effects on household income during adolescence.

Hypothesis 3b: Household income during adolescence will exert significant positive direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 3c: Parental occupational prestige will exert significant positive direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 3d: Parental educational attainment will exert significant positive direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 3e: Household income during adolescence will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when household income during adolescence is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 3f: Household income during adolescence will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at lower levels of household income during adolescence, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Hypothesis 3g: Parental occupational prestige will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at lower levels of parent occupational prestige, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Hypothesis 3h: Parental educational attainment will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at lower levels of parent educational attainment, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Criminal Justice Contact

The intergenerational connections between parental incarceration and offspring offending and criminal justice contact are perhaps the best-established and most

consistent findings in the parental incarceration literature. These linkages have been explained through a variety of criminological perspectives ranging from the biological perspective to the social learning and strain perspectives. Because parental incarceration likely facilitates the social learning of criminal behavior, creates strain and negative emotional states, reduces social control, and facilitates a cumulative disadvantage process, I expect that parental incarceration will have a direct positive effect on criminal justice system contact.

Criminal justice system contact (especially in the form of incarceration) has also been linked to poorer SES outcomes. Therefore, I expect criminal justice contact to have significant negative direct effects on income, occupational prestige, and educational attainment. Thus, I expect criminal justice contact to mediate the relationship between parental incarceration and income, occupational prestige, and educational attainment. I also expect that criminal justice contact will moderate the effects of parental incarceration. Respondents who have had contact with the criminal justice system themselves may face a “double stigma” when their parents are incarcerated that may result in even more damaging outcomes. Thus, I expect higher levels of criminal justice contact to exacerbate the negative effects of parental incarceration on income, occupational prestige, and educational attainment. In this study, I use the number of respondents’ arrests as an adult as my measure of criminal justice contact. My hypotheses regarding this variable’s relationship to parental incarceration and SES outcomes are as follows:

Hypothesis 4a: Parental incarceration will have significant positive direct effects on adult arrests.

Hypothesis 4b: Adult arrests will exert significant negative direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 4c: Adult arrests will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when the adult arrests variable is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 4d: Adult arrests will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of adult arrests, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Social Isolation

The stigmatization perspective suggests that parental incarceration creates a stigma that is attached not only to those who are incarcerated, but to their families as well. The associated stigma can lead to both economic and social exclusion. For children, social exclusion often takes the form of bullying, teasing, and passive exclusion. There is also some evidence that social isolation and exclusion negatively affects economic and human capital accumulation. Also, having high degrees of social capital may mitigate the effects of stressful life experiences (Lin 1999). Therefore, I expect that children with incarcerated parents will report higher levels of social isolation. Further, I expect a mediating effect such that: 1) parental incarceration exerts a significant positive effect on social isolation, 2) social isolation exerts significant negative effects on income, occupational prestige, and educational attainment, and 3) the strength of the effects of parental incarceration on income, occupational prestige, and educational attainment will be significantly reduced when social isolation is included in my models. I also predict a

moderating effect such that the explanatory power of parental incarceration in models of income, occupational prestige, and educational attainment will be greater at higher levels of social isolation. Thus, I expected to find support for the following hypotheses:

Hypothesis 5a: Parental incarceration will exert significant positive direct effects on social isolation.

Hypothesis 5b: Social isolation will exert significant negative direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 5c: Social isolation will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when social isolation is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 5d: Social isolation will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of social isolation, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Negative Emotions

Because criminological theory and research indicate that parental incarceration is associated with a greater likelihood of negative affective states and a greater likelihood of antisocial behavior, offending, and criminal justice contact, I hypothesize that parental incarceration will have a significant direct positive effect on depression, anger, and stress. The stratification and emotions literature also suggests that these negative emotions may have negative effects on educational and social status attainment. Therefore, I expect that depression, anger and stress will have a significant mediating effect on the relationship between parental incarceration and Add Health respondents' SES outcome, such that: 1) parental incarceration exerts a significant positive effect on all three negative emotions, 2) all three negative emotions exert significant negative effects on income, occupational

prestige, and educational attainment, and 3) the strength of the effects of parental incarceration on income, occupational prestige, and educational attainment will be significantly reduced when measures of negative emotions are included in my models. Respondents with pre-existing emotional problems may react differently to parental incarceration. Thus, I predict that depression, anger, and stress will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment. Specifically, I expect that the effects of parental incarceration on income, occupational prestige, and educational attainment will be more noxious at higher levels of all three.

Hypothesis 6a: Parental incarceration will exert significant positive direct effects on depression.

Hypothesis 6b: Parental incarceration will exert significant positive direct effects on anger.

Hypothesis 6c: Parental incarceration will exert significant positive direct effects on stress.

Hypothesis 6d: Depression will exert significant negative direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 6e: Anger will exert significant negative direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 6g: Stress will exert significant negative direct effects on household income, occupational prestige, and educational attainment.

Hypothesis 6h: Depression will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when depression is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 6i: Anger will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when anger is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 6j: Stress will mediate the effects of parental incarceration on household income, occupational prestige, and educational attainment such that, when stress is included in the models using parental incarceration to predict income, occupational prestige, and educational attainment, the explanatory power of parental incarceration will be substantially reduced.

Hypothesis 6k: Depression will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of depression, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Hypothesis 6l: Anger will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of anger, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Hypothesis 6m: Stress will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that, at higher levels of stress, the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance.

Demographic Characteristics

In this study, I examine the differential effects of parental incarceration by gender, race, and ethnicity, and age of the respondent. Most theoretical and empirical literature suggests that parental incarceration is generally equally stressful for males and females. However, because some research shows that parental incarceration might have a slightly more negative impact on males, I hypothesize that gender will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects are greater in magnitude and significance for males. I also hypothesize that race and ethnicity will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration will be greater in magnitude and significance for blacks (when compared to

non-blacks), lesser in magnitude for whites (compared to non-whites) and Hispanics (when compared to non-Hispanics). Parental incarceration also appears to have greater effects on younger children. Therefore, I expect that age will moderate the effects of parental incarceration such that the effects of parental incarceration on income, occupational prestige, and educational attainment will also become less significant at older ages.

Hypothesis 7a: Gender will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for male respondents relative to female respondents.

Hypothesis 7b: Race will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for black respondents relative to non-black respondents and lesser in magnitude for white respondents relative to non-white respondents.

Hypothesis 7c: Ethnicity will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for Hispanic respondents relative to non-Hispanic respondents.

Hypothesis 7d: Age will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance at higher levels of age.

Neighborhood Context

Finally, they are not all listed in my conceptual model, but I also expected several neighborhood-level characteristics to moderate the relationship between parental incarceration and school and class outcomes. It is difficult to predict the moderating effects of contextual variables because the resiliency hypothesis and disadvantage

framework suggest that the effects of incarceration are relatively weaker when individuals live in an already disadvantaged context. This is because incarceration is thought to be more normative and less stigmatizing in such a context. On the other hand, the cumulative disadvantage framework and the double-jeopardy hypotheses suggest that multiple disadvantages compound each other's deleterious effects when they are experienced together. Because there seems to be more evidence supporting the cumulative disadvantage framework, I hypothesize that parental incarceration's effects on income, occupational prestige, and educational attainment will be relatively greater among respondents who lived in neighborhoods with a majority of black residents, neighborhoods with a higher proportion of Hispanic residents, neighborhoods that are urban, neighborhoods with lower levels of modal education attainment, and neighborhoods with higher poverty rates

Hypothesis 8a: Neighborhood racial composition will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for among respondents who lived in neighborhoods with a majority of black residents relative to respondents who lived in other neighborhoods.

Hypothesis 8b: Neighborhood ethnic composition will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for among respondents who lived in neighborhoods with higher proportions of Hispanic residents.

Hypothesis 8c: Urbanicity will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance for respondents who lived in urban neighborhoods relative to those who had not.

Hypothesis 8d: Neighborhood poverty level will moderate the effects of parental incarceration on income, occupational prestige, and educational attainment such that the effects of parental incarceration on household income, occupational prestige, and educational attainment will be greater in magnitude and significance among respondents who lived in neighborhoods with higher levels of neighborhood poverty.

CHAPTER IV

DATA AND METHODS

Sampling Methods

The data for this study came from all four waves of the National Longitudinal Study of Adolescent Health (Add Health), which is a longitudinal study of a nationally-representative sample of adolescents in the U.S. Add Health has followed adolescents who were in grades seven through twelve in the 1994 to 1995 academic year into young adulthood. It is one of the most comprehensive longitudinal studies of social and health behaviors and characteristics because of its wide range of topics, depth of measurement, and its longitudinal and representative characteristics. Add Health used a school-based stratified sampling technique to construct its sample. They began with a list of all high schools in the U.S. with an enrollment over 30 provided by the National Quality Education Database, and stratified it by region, urbanicity, school type (private, public, parochial), ethnic composition, and size. They employed a probability proportionate size technique to select high schools from a total of 80 communities. They then selected one middle school that fed students into each high school. About 70 percent of the schools in these middle schools agreed to participate in the study. Add Health was able to find replacement schools in the same stratum for all of the schools that chose not to participate. Because some of the high schools spanned grades seven through twelve a

true “pair” of schools was not obtained in each of the 80 communities, so the final sample totaled 132 schools throughout the U.S (Harris 2011).

Add Health actually created two samples in its first wave of data collection: 1) a cross-sectional sample of the 90,000 students in the selected schools, and 2) a longitudinal sample of students that was selected from the cross-sectional sample that would participate in more in-depth in-home interviews and would be asked to participate in future waves of data collection. The original cross-sectional sample provided researchers information about school context, friendship networks, and health conditions that could be later associated with individual outcomes in the longitudinal sample and it also provided researchers with information that would help them select the longitudinal sample. Information about demographic, socioeconomic, and health characteristics allowed them to stratify the cross-sectional sample and to oversample individuals in special populations that were rare, but of special interest to researchers (e.g. twins, disabled students, Chinese-American students, and African American students with highly educated parents). Seventy-nine percent of the approximately 26,260 students who were asked to participate in the longitudinal sample agreed, creating a longitudinal sample of 20,745 students. This consisted of a representative “core sample” of 12,105 students and “supplemental samples” of special populations that totaled 8,640 students (Harris 2011).

Add Health also asked one parent or parent figure of each student in the longitudinal sample to complete a parent interview. This allowed researchers to collect information about things such as family health history, family economic conditions, and parental relationships. It also allowed them to compare parents and children’s

assessments of their relationships with each other and their behavior in general. About 85 percent of the parents selected for these interviews agreed to participate and most were residential mothers (Harris 2011).

Add Health conducted follow-up interviews for Wave II, one year after the initial Wave I interviews. About two-thirds of the original longitudinal sample participated in Wave II (N=14,738). The questions in these interviews closely matched the questions in Wave I. The third wave of interviews were conducted from 2001 to 2002, when the participants were ages 18 to 26. Add Health included all of the respondents in the original longitudinal sample in its sampling frame and was able to conduct interviews of 15,197, yielding a response rate of 77.4 percent. Many of the items from the first two waves were included in the Wave III interviews, but researchers also included several questions relevant to the transition to adulthood including labor market participation, wealth and debt, higher education, relationships, and civic participation. Add Health also collected biological specimens, data from high school transcripts, additional data from a “binge drinking” subsample, and additional data from a sample of respondents in romantic relationships (and their partners) for the first time at Wave III. Finally, Wave IV interviews were conducted in 2008 when the respondents were ages 24 to 32. Again, Add Health attempted to interview the entire original longitudinal sample. They located 93 percent of the original sample and interviewed 80 percent of those whom they were able to locate, yielding 15,701 interviews. The Wave IV interviews closely matched the interviews from Wave III; however, they also included more detailed measures of victimization, offending, socioeconomic status, and emotional health as well as more detailed biological data (Harris 2011).

At each wave, Add Health collected data from the longitudinal sample using trained interviewers who usually interviewed respondents in their home environment. The interviewers read questions to respondents for most of the items on the questionnaire and used computer-assisted self-interview (CASI) technology to obtain information about sensitive topics and/or illegal behaviors (Harris 2011).

In this study, I analyzed data from the public-use samples from Waves I and IV that Add Health makes available through the Interuniversity Consortium for Political and Social Research. This sample included about one-half of its core sample and one-half of its oversample of African American adolescents. Combined, these samples include one-third of the Add Health full sample. I only analyzed data from respondents who participated in both Wave I and Wave IV. This included 5,110 Add Health respondents.

Detailed questions regarding parental incarceration were not asked until Wave IV. However, as described below, these questions were retrospective, which allowed me to examine the effects of parental incarceration on several outcomes at each of the different stages of Add Health respondents' life course. It also allowed me to examine the immediate and long term effects of parental incarceration, the cumulative effects of parental incarceration, and the mediating and moderating effects of other variables.

Measures

Independent Variables

I created several indicators of biological parents' incarceration using questions that were first asked in Wave IV of Add Health. Add Health included a single question asking respondents if their biological father had ever been incarcerated in Wave III.

They expanded this inquiry in Wave IV to measure both biological mother's and

biological father's incarceration history. Add Health also asked about the incarceration of non-biological parent figures, but because only a small percentage of respondents indicated that a non-biological parent figure had been incarcerated, I only examined incarceration of biological parents in order to simplify my analyses. Add Health first asked respondents if their parents had ever spent time in jail or prison. If a respondent indicated that a parent had been incarcerated at some point in his or her life, Add Health then asked how many times that parent had spent time in prison or jail. They also asked how old the respondent was when that parent went to jail or prison (the first time, if the parent had been incarcerated more than once) and how old the respondent was when the parent was released (most recently, if the parent had been incarcerated more than once). Responses for these questions ranged from "before I was born" to age 31.

Parental Incarceration Prevalence

I used the questions regarding respondents' age at their parent's first incarceration and their ages at Waves I and IV to first create variables measuring the prevalence of any form of parental incarceration in respondents' lives. I first created a dummy variable indicating whether respondents had experienced the incarceration of a biological parent before Wave I. This variable, "Wave PI dummy," was coded such that respondents who did not report a biological parent entering or leaving jail or prison between their birth and their age at Wave I were coded "0." Respondents who reported a biological parent entering or leaving jail or prison between their birth and their age at Wave I were coded "1." I was not able to code some respondents for this variable. This is because some respondents indicated that their parent's incarceration started at the same age they were at

Wave I. In this situation, I was not able to determine if the parental incarceration started before or after the Wave I interview, so I coded these respondents as missing.

I used a similar procedure to code a dummy variable called “childhood PI dummy.” This reflects whether or not respondents had experienced the incarceration of a biological parent before age 18. Respondents who reported at least one biological parent entering or leaving jail or prison between their birth and age 18 before Wave I were coded “1.” Respondents who did not report a biological parent entering or leaving jail or prison during this period were coded “0.”

Finally, I created a variable called “Wave IV PI dummy” measuring whether or not respondents had experienced parental incarceration before their Wave IV interview. Respondents who reported a biological parent entering or leaving jail or prison between their birth before Wave IV were coded “1.” Respondents who did not report a biological parent entering or leaving jail or prison between their birth before Wave IV were coded “0.”

Parental Incarceration Duration

Of course, not all parental incarcerations are alike. Some last only a few hours or a few days and others span the entire lifespan of an individual. Therefore, it was necessary to examine the duration of parental incarceration as well. There is some evidence throughout the literature that the effects of incarceration vary by the duration of incarceration. Some studies demonstrate that in some cases, longer periods may be more detrimental to children while others demonstrate that longer periods may actually be more beneficial for children.

I created three variables measuring the duration, or length, of respondents' biological parents' incarceration. These variables were called "Wave I PI duration," "childhood PI duration" and "Wave IV PI duration." These variables reflected the number of years respondents' parent(s) had been in prison prior to the Wave I interview date, their 18th birthday, and the Wave IV interview date, respectively. I calculated Wave I PI duration, childhood PI duration, and Wave IV PI duration by subtracting the age of the respondent at the parent's first admission to jail or prison from the age of the respondents at the parent's latest release and then adding one. If the release came after the interview in question (or age 18 for childhood PI duration), I used the respondent's age at that interview (or age 18 for PI duration) rather than their age at their parent's most recent release. If a respondent's parent's incarceration started before they were born, I used zero as the age at their parent's first entry to prison. If a child experienced the incarceration of both a biological mother and a biological father prior to Wave I, age 18, and/or Wave IV, I adjusted the values to reflect the number of years the respondent had experienced the incarceration of any biological parent. Because the parental incarceration duration variables were positively skewed, I also took the natural log of their values to use in multivariate analyses involving parental incarceration duration.

Add Health did not ask about the starting points and ending points of each incident of respondents' parents' incarceration. Therefore, I was only able to calculate incarceration duration variables for respondents who reported that their biological parent(s) had been incarcerated only once. Respondents with biological parents who had never been incarcerated and respondents with a biological parent who was incarcerated

more than once were coded as missing and excluded from the analyses of the effects of parental incarceration duration.

For some respondents, I could not determine whether or not their parent's incarceration started prior to Wave I of Add Health because it was impossible to determine if the parent's incarceration started before or after the date of some respondents' Wave I interview. This made it impossible to code them for the Wave I parental incarceration dummy variable and impossible to determine a length for the Wave I parental incarceration duration variable. As a result, such respondents were coded as missing for both.

Descriptive Statistics

Table 4.1 presents the descriptive statistics for the primary independent and dependent variables I used in my analyses. Of the 4,926 respondents in the public-use Add Health sample for which parental incarceration data were not missing, 481 had experienced the incarceration of at least one biological parent between birth and the year they completed the Wave I questionnaire. Descriptive statistics for Wave I PI dummy show that a proportion of .098 (or 9.8% of) respondents experienced parental incarceration before Wave I. Of those 481 respondents, I was able to calculate Wave I PI duration for 267 (because their parent had been incarcerated only once and there was no ambiguity regarding whether the incarceration started/ended before Wave I). The mean length of parental incarceration among these respondents (Wave I PI duration) was 2.019 years.

Table 4.1 Descriptive Statistics for Primary Independent Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
Wave I PI dummy	4926	.000	1.000	.098	.297
Wave I PI duration	267	.000	18.000	2.019	3.530
Wave I PI duration (logged)	267	.000	2.944	.704	.802
Childhood PI dummy	4694	.000	1.000	.117	.322
Childhood PI duration	216	1.000	18.000	2.968	4.031
Childhood PI duration (logged)	216	.693	2.944	1.098	.647
Wave IV PI dummy	4969	.000	1.000	.133	.339
Wave IV PI duration	283	1.000	32.000	3.558	5.851
Wave IV PI duration (logged)	283	.693	3.497	1.139	.724

The proportion of respondents who had experienced parental incarceration of any length during their lifetime increased when using birth and age 18 as the cutoff points to determine parental incarceration history. Five hundred and fifty-one, or 11.7 percent (or a proportion of .117) of respondents had experienced parental incarceration before age 18. I was able to calculate incarceration lengths for 216 of those 551 respondents. The average of the length of parental incarceration among respondents whose parents had been incarcerated only once prior to age 18 was 2,968 years.

Even more respondents had experienced the incarceration of a parent between birth and the date they responded to the Wave IV questionnaire. Six hundred and fifty-nine respondents had experienced parental incarceration during this period. The descriptive statistics for Wave IV PI dummy indicate that this amounts to a proportion of .133 (or 13.3% of) respondents. I was able to calculate incarceration lengths for 281 of the 659 respondents who had experienced incarceration prior to Wave IV. The average parental incarceration length experienced by those respondents (Wave IV PI duration) was 3.558 years.

Dependent Variables

I used three measures of SES outcomes as the primary dependent variables in my analyses. These variables included “Wave IV household income,” “Wave IV occupational prestige,” and “Wave IV educational attainment.”

Wave IV Household Income

At Wave IV, respondents were asked to provide their exact household income in dollars. Wave IV household income reflects these values. I used Wave IV household income in my analyses of its bivariate relationships with other variables. However, because this variable was positively skewed, I also took the natural log of the values for Wave IV household income (after adding 1 in order to retain zero values) to use in multivariate analyses involving Wave IV household income.

Wave IV Occupational Prestige

Add Health asked respondents to report information about their job title at Wave IV. Respondents were asked to select an occupational title for their primary job (the one at which they worked the most hours) from the 2000 Standard Occupational Classification (SOC) system created by the Bureau of Labor Statistics (2001). I linked these codes to Hauser and Warren (1997) socioeconomic index (SEI). The Hauser and Warren SEI draws upon the methodology of the original Duncan (1961) SEI. It is a composite index of occupational prestige, education, and income associated with a particular occupation. The occupational prestige scores used in this scale were taken from the 1989 General Social Survey in which a nationally-representative sample of respondents were asked to rank occupations from 1 (lowest possible) to 9 (highest

possible) according to their level of social standing (Nakao and Treas 1994). These scores were then regressed onto educational and income levels for each occupation using data from the 1990 U.S. Census to create the SEI scores. “Wave IV occupational prestige” reflects the Hauser and Warren (1997) SEI scores for respondents’ reported occupations at Wave IV.

Wave IV Educational Attainment

At Wave IV, Add Health asked respondents to indicate their highest level of education. Responses ranged from “8th grade or less” to “doctoral degree” and “post baccalaureate professional education.” I used responses to this question to create a variable called “Wave IV educational attainment.” In order to maintain consistency with the educational attainment coding scheme for parents, I recoded this variable so that the values ranged from 0 (did not go to school) to 8 (professional training beyond a four-year college or university). The revised coding scheme is listed in Appendix A.

Descriptive Statistics

Table 4.2 also presents the descriptive statistics for the three primary dependent variables used in my analyses—Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment. The mean Wave IV household income (in 2009 dollars) was \$61,698.60, with a minimum of \$0 and a maximum of \$175,000. The mean Wave IV occupational prestige score was 37.796. These values ranged from 9.560 to 80.5000. Finally, the mean for Wave IV educational attainment was 5.714, with a minimum of 1.000 and a maximum of 8.000.

Table 4.2 Descriptive Statistics for Primary Dependent Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
Wave IV household income	5110	.000	175000.000	61698.599	40968.669
Wave IV household income (logged)	5104	4.988	12.073	10.759	.854
Wave IV occupational prestige	5110	9.560	80.500	37.796	13.888
Wave IV educational attainment	5110	1.000	8.000	5.714	1.630

Wave I, CJ Contact, and Parent SES Moderating and Mediating Variables

Wave I Social Support

I used a seven-item scale of social support used in Kaufman (2009) and Harker (2001) that includes questions that asked respondents how much support they received from adults, teachers, and family members. The items included in this scale are listed in Appendix B. The answers to these questions ranged from 1 (not at all) to 5 (very much). I took the mean of respondents' scores on these items to create a scale called "Wave I social support." The Cronbach's alpha reliability score for this scale (.957) indicated that it was highly reliable.

Wave I Household Income

In order to examine the mediating role of family economic disadvantage in the relationship between parental incarceration and respondents' SES outcomes, I created three measures of the SES of respondents and their parents at Wave I. First, I used respondents' parents' responses to a question their household income at Wave I to create a variable called "Wave I household income." In order to maintain consistency with Wave IV household income, I adjusted the reported incomes for inflation so that they would reflect values in 2009 dollars. To do this, I used the Consumer Price Index

Inflation Calculator provided on the United States Department of Labor's (2012) Bureau of Labor Statistics website.

Parent Educational Attainment

Add Health also asked respondents to indicate their parent's educational attainment at Wave I. They asked respondents how far their residential fathers and mothers and biological fathers and mothers had gone in school. The responses for these questions ranged from 0 (did not go to school) to 9 (professional training beyond a four-year college or university). I merged this coding system with the system used for the respondents to create a universal coding scheme for both parents and respondents that ranges from 0 (did not go to school) and 8 (professional training beyond a four-year college or university). The revised coding scheme can be found in Appendix C. I used questions about residential fathers' and mothers' education and biological fathers' and mothers' education that were asked at Wave I to create a variable called "parent education." It reflects the highest level of education respondents' parents (of any type) had attained by the time of the Wave I interview.

Parent Occupational Prestige

I created a variable measuring parent occupational prestige using a question asked about respondents' parents' occupations in Wave I interviews. At Wave I, respondents were asked to select a general occupational grouping that corresponded to the main job of their residential parent(s). The list of fourteen original occupational groupings is provided in Appendix C. I combined these grouping into four groupings. The group coded "1" included occupations that required low levels of education and/or manual

labor. The group coded “2” included occupations that required more skills and training, but still involved manual labor. The group coded “3” included occupations that involved work in commercial or retail establishments, but were not professions that typically require high levels of education. Finally, the group coded “4” included occupations that are considered professions and require higher levels of skill, training, and education. The values associated with each occupational grouping are also listed in Appendix C. I created a variable called “parent occupational prestige” that reflected the highest occupational ranking of respondents’ residential fathers and mothers at Wave I.

Criminal Justice Contact

I created one variable measuring respondents’ criminal justice contact during adulthood. This variable, “adult arrests,” reflects the sum of the number of times respondents reported being arrested after their 18th birthdays.

Descriptive statistics

Table 4.3 presents the descriptive statistics for the Wave I, CJ contact, and parent SES mediating and moderating variables. The means for Wave I social support, Wave I household income (in 2009 dollars), parent occupational prestige, and parent occupational prestige were 4.037, \$66,535.81 and 10.750, respectively. Add Health respondents, on average had been arrested .545 times.

Table 4.3 Descriptive Statistics for Wave I, CJ Contact, and Parent SES Mediating Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
<i>Wave I Mediating Variables</i>					
Wave I social support	5110	1.000	5.000	4.037	.580
Wave I household income	5110	.000	1410000.000	66535.814	69672.494
Wave I household income (logged)	5058	.000	14.160	10.750	1.252
<i>CJ Contact Mediating Variable</i>					
Adult arrests	5081	.000	25.000	.545	1.932
<i>Parent SES Controls</i>					
Parent occupational prestige	5110	1.000	4.000	2.924	1.125
Parent educational attainment	5110	.000	8.000	5.510	1.853

Wave IV Mediating and Moderating Variables

Wave IV Social Isolation

Add Health included a question in its Wave IV questionnaire that asked respondents, “How often do you feel isolated from others?” Answer choices included “never,” “rarely,” “sometimes,” and “often” and were coded “0,” “1,” “2,” and “3,” respectively, to create a variable called “Wave IV social isolation.”

Wave IV Depression

Add Health included a shortened version of the Center for Epidemiologic Studies Depression Scale (CES-D) at each wave of interviews. In this scale, respondents were asked to indicate how often they experienced feelings associated with depression such as tiredness, trouble concentrating, and sadness as well as feelings of happiness such as enjoying life and feeling as good as other people in the past seven days. Responses ranged from 0 (never or rarely) to 3 (most of the time or all of the time). Add Health included 19 items (of the original 20 on the CES-D) at Wave I, but only five items at Waves III and IV. I limited all of my measures of depression to the items included at

Waves III and IV. I also reverse coded those items asking about feelings of happiness so that higher scores reflected higher levels of depression for each item. I used a mean of the scores for each item to create a variable called “Wave IV depression.” The Wave IV depression scale appeared to have good internal consistency, Cronbach’s alpha=.789. The items included in this scales are listed in Appendix D.

Wave IV Anger

At Wave IV, Add Health included several items from the questionnaire that were derived from a personality scale that was based on the “five-factor model” of personality. I used four items from the neuroticism sub-scale to construct an anger scale. Respondents were asked to indicate the degree to which they agreed with the following statements of a scale from 1 (strongly agree) to 5 (strongly disagree): “I get angry easily,” “I lose my temper,” “I rarely get irritated,” “I keep my cool”. I reverse coded the first two items so that a higher score reflected a higher degree of anger for each item. I then summed the scores for each item to create a variable called “Wave IV anger.” This scale also appeared to have good internal consistency, Cronbach’s alpha=.762. The items included in this scale are presented in Appendix D.

Wave IV Stress

I used respondents’ answers to four questions in the Wave IV questionnaire to measure respondents’ overall stress. These questions were: 1) “In the last 30 days, how often have you felt that you were unable to control the important things in your life?”; 2) “In the last 30 days, how often have you felt confident in your ability to handle your personal problems?”; 3) “In the last 30 days, how often have you felt that things were

going your way?"; and 4) "In the last 30 days, how often have you felt that difficulties were piling up so high that you could not overcome them?" Responses ranged from 0 (never) to 4 (very often). I reverse coded the responses to the second two items so that a higher score indicated a higher level of stress and then took the mean of the respondents' scores for all four items create a variable called Wave IV stress." The full list of the items and responses in this scale is provided in Appendix D. The Cronbach's alpha (.704) for this scale indicated that it had an acceptable level of reliability.

Descriptive Statistics

Table 4.4 presents descriptive statistics for the Wave IV mediating/moderating variables that I used in my analyses. The mean scores for Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress were .949, .521, 2.552, and 1.202, respectively.

Table 4.4 Descriptive Statistics for Wave IV Mediating and Moderating Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
Wave IV social isolation	5110	.000	3.000	.949	.915
Wave IV depression	5110	.000	3.000	.521	.510
Wave IV anger	5110	1.000	5.000	2.552	.724
Wave IV stress	5110	.000	4.000	1.202	.731

Demographic Characteristics

I used several demographics as control variables in my analyses. I also conducted analyses to determine if these variables moderated the effects of parental incarceration variable on income, occupational prestige, and educational attainment. These variables

included five dummy variables indicating race, one dummy variable indicating ethnicity, a variable measuring respondents' gender, and a variable measuring respondents' age.

Race and Ethnicity

The race of Add Health respondents was not assessed at Waves II and IV of Add Health. However, it was assessed at Waves I and III. I used data from Wave I to create my race variables. Respondents were asked to indicate if they belonged to following racial groups: “white”, “black or African American”, “American Indian or Native American”, “Asian or Pacific Islander” and “other”. I created a dichotomous dummy variable for each of these five racial categories. These variables were named “white”, “black”, “Asian”, and “American Indian” and “other race,” respectively. Those respondents who selected the racial category were coded “1.” Those who did not were coded “0.”

Many respondents selected more than one racial category. Those respondents were asked to select which category best described their racial background. I used this variable to ensure that each respondent was coded “1” for only one racial category. American Indian served as the reference category in most regression models.

I also created a dichotomous dummy variable called “Hispanic ethnicity” using responses to a question asking respondents at Wave I if they were of Hispanic or Latino origin. Those who responded “yes” were coded “1” and those who answered “no” were coded “0.”

Gender and Age

Add Health asked respondents to indicate their biological gender at each wave. Those who indicated that they were male were coded “1” and those who indicated that they were female were coded “0” to create a dummy variable called “male.”

I used the dates of the respondents’ Wave IV interviews and their birth dates reported at Wave I to calculate their age at Wave IV. This variable is called “age.”

Descriptive Statistics

Table 4.5 presents descriptive statistics for the demographic variables I used in my analyses. About 46 percent of the Add Health public-use sample was male. Fifty-four percent of respondents were female. About two-thirds (65.9 percent) identified “white” as their main race. About one-quarter (23.8 percent) identified “black or African American” as their main race. Three percent identified “Asian” as their main race and 5.9 percent identified some other race not listed above as their main race. About one-tenth (10.4 percent) of the sample indicated a Hispanic ethnicity. The mean age at Wave IV was 28.412 year, with range of 24 years to 33 years.

Table 4.5 Descriptive Statistics for Demographic Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
Male	5110	.000	1.000	.460	.498
White	5097	.000	1.000	.659	.474
Black	5097	.000	1.000	.238	.426
Asian	5097	.000	1.000	.030	.171
American Indian	5110	.000	1.000	.014	.118
Other race	5097	.000	1.000	.059	.236
Hispanic	5098	.000	1.000	.104	.305
Age	5110	24.000	33.000	28.412	1.796

Contextual Variables

Add Health created variables using data from the 1990 U.S. Census to create several contextual measures that reflect demographic and structural characteristics of the block groups (I also refer to these as “neighborhoods”) in which respondents lived at Wave I. I used the variables they created that reflect the racial composition, ethnic composition, urbanicity, and socioeconomic structure of respondents’ neighborhoods in my analyses.

Black Neighborhood

I labeled the first contextual variable “black neighborhood.” This was a dummy variable that indicated whether or not black is the modal race of the residents of the neighborhood. Neighborhoods in which the modal race was not black were coded “0.” Neighborhoods in which the modal race was black were coded “1.”

Proportion Hispanic

I also used a variable called “proportion Hispanic” that reflected the percentage of a neighborhood’s population that identified as Hispanic. Neighborhoods coded “1” (low) had a population that was less than 25 percent Hispanic, neighborhoods coded “2” (medium) had a population that was 26 to 49 percent Hispanic, neighborhoods coded “3” (high) had a population that was 50 to 74 percent Hispanic, and neighborhoods coded “4” had a population that was 75 percent or more Hispanic.

Urbanicity

I used a dummy variable I labeled “urban neighborhood” to account for urbanicity. For this variable, neighborhoods that were in completely urbanized areas (as

designated by the U.S. Census Bureau) were coded “1” and neighborhoods that were not in completely urbanized areas were coded “0.”

Modal Education

“Modal education” reflects the most common level of education attained by adult residents in a neighborhood. Neighborhoods were coded “1” (mode=no high school degree or equivalency), “2” (mode=high school degree, no college degree), or “3” (college degree or more).

Neighborhood Poverty

Finally, “neighborhood poverty” reflects the proportion of a neighborhood’s population with incomes below the 1989 poverty level. Neighborhoods where the proportion was below the median poverty level (11.6 percent) were coded “1” (low), neighborhoods where the proportion was between 11.6 and 23.9 percent were coded “2” (medium), and neighborhoods where the proportion was 24 percent or greater were coded “3” (high).

Descriptive Statistics

Table 4.6 presents the descriptive statistics for the measures of neighborhood context I used in my analyses. The proportion for “black neighborhood” indicates that about 15.7 percent of Add Health respondents lived in a neighborhood at Wave I where black was the modal race its residents. The mean “proportion Hispanic” level for Add Health respondents was 1.135. The proportion for “urban neighborhood” indicates that about half of Add Health respondents lived in neighborhoods that were in completely

urbanized areas. Finally, the mean neighborhood poverty level for Add Health respondents was 1.668.

Table 4.6 Descriptive Statistics for Contextual Variables

	N	Min.	Max.	Mean (or proportion)	Std. Deviation
Black neighborhood	5110	.000	1.000	.157	.363
Proportion Hispanic	5049	1.000	4.000	1.135	.510
Urban neighborhood	5049	.000	1.000	.501	.500
Modal education	5022	1.000	3.000	1.938	.507
Neighborhood poverty	5049	1.000	3.000	1.668	.814

Analytical Strategy

I employed a multi-faceted and multistage statistical analysis plan in this study. I used multiple types of statistical analyses as well as multiple waves of data. As Ganzeboom, Treiman, and Ultee (1991) point out, there have been three “generations” of stratification research in the social sciences. In the first generation, researchers used contingency tables to examine the association between fathers’ and sons’ occupations. In the second generation, researchers used the Blau and Duncan (1967) model of using path analysis to analyze and compare the effects of educational attainment, parental social status, and other explanatory variables on status attainment across the life course. Finally, in the third generation, researchers used loglinear regression analyses to examine determinants of intergenerational mobility between classes without rank-ordering them first. I primarily used methods from the second “generation” in my analyses.

Bivariate Analyses

Mobility Table Analysis

The first generation of stratification research was marked by the analysis of intergenerational mobility tables. These methods were relatively crude compared to the statistical modeling techniques that developed afterward. Researchers would generally examine the in-flow and out-flow to and into different occupational categories and then calculate overall mobility chances of moving across categories. These chances were usually then compared across nations (Ganzeboom et al. 1991). I began my analyses by first splitting the Add Health sample into pairs of subsamples with one consisting of respondents who had not experienced parental incarceration at given time point and the other consisting of respondents who had experienced parental incarceration at a given time point. I then calculated and compared the overall intragenerational/intergenerational mobility chances for each subsample.

Pearson Correlations

After analyzing difference in mobility tables by parental incarceration, I calculated bivariate correlation coefficients in order to examine the bivariate relationships between the variables analyzed in this study. These correlations allowed me to assess the linear relationships between the variables in my study. They also allowed me to examine possible issues of multicollinearity.

Independent Samples T-tests for Mean and Proportion Differences

I concluded my bivariate analyses by comparing means and proportions for the independent, dependent, and mediating variables by gender, race, and parental

incarceration history using independent samples t-tests and for mean and proportion differences. First, I used these tests to examine if the means or proportions for the independent variables and dependent variables varied significantly between male and female respondents. I then examined whether the means or proportions for these variables differed significantly between white and black respondents.

I also estimated independent samples t-tests to determine if the means for the dependent and mediating variables differed by parental incarceration history. I first tested to see the means for Wave IV household Income, Wave IV occupational prestige, and Wave IV educational attainment differed when comparing respondents who had experienced parental incarceration before Wave I to those who had not. I then tested to see if the means for the same variables differed significantly when comparing respondents who had experienced parental incarceration before Wave IV to respondents who had not.

To test for significant differences in the means for the mediating variables, I first compared the means for the Wave IV mediating variables—Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress. For these variables, I compared the means for respondents who had experienced parental incarceration before Wave IV to respondents who hadn't. I then compared Wave I social support and Wave I household income means for respondents who had experienced parental incarceration before Wave I to those who had not. Finally, I compared mean number of adult arrests for respondents who had experienced parental incarceration before age 18 to the mean number of adult arrests for respondents who had not experienced parental incarceration before age 18.

Multivariate Analyses

I also conducted several multivariate analyses to examine the effects of parental incarceration on income, occupational prestige, and educational attainment while controlling for other relevant variables that may explain away the bivariate relationships examined in my first set of analyses. In the first type of multivariate analyses I conducted, I used ordinary least squares (OLS) regression to examine the direct effects of the parental incarceration variables on income, occupational status, and education.

I also examined the effects of the interactions between the parental incarceration variables and several other variables in order to test for moderation effects. Researchers typically test for moderating effects by: 1) creating an interaction term that is the product of the independent variable and moderating variable, 2) regressing the independent variable, moderating variable, interaction term, and control variables on the dependent variable, 3) determining the significance of the effect of the interaction term, and 4) if the effect of the interaction term is significant, examining the significance and strength of effects of the independent variables on the dependent variable at different values of the moderating variable. I used this procedure, which is illustrated in Figure 4.1, in my own tests for moderation.

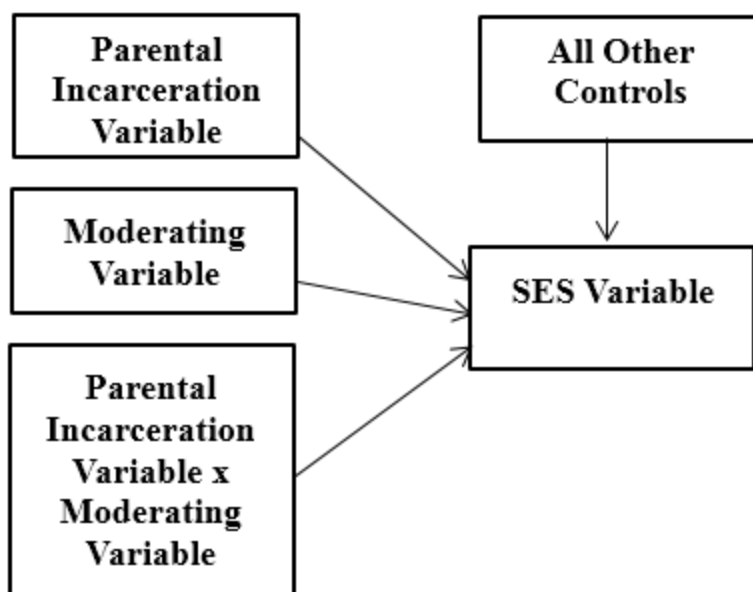


Figure 4.1 Analysis Strategy for Moderation Effects

Mediating Effects and Blau and Duncan Status Attainment Models

The second generation of stratification research was prompted by: 1) the development of path analysis techniques, 2) the development of Duncan's (1961) socioeconomic index (SEI) occupational status scale, and 3) the development of a more detailed U.S. Census' occupational classification system. These developments allowed researchers to move beyond the mainly descriptive and/or macro-level studies of mobility of the past and examine the effects of several types of explanatory variables (primarily educational attainment) on occupational status. The major finding in this wave of research was that ascribed status (usually measured by parent occupational status or education) was not as influential in the determination of respondents' occupational status as achieved status (usually measured by respondents' educational attainment). Much of the variance in respondents' educational attainment, however, was explained by parent

occupational status and education. Thus, education was determined to be the major mechanism of social reproduction. However, other factors such as homogamy, cognitive ability, neighborhood context, and religion, were also found to mediate the relationship between parental and respondent occupational status (Ganzeboom et al. 1991).

I used the Blau-Duncan path analysis model in my own analyses by testing for mediation effects in the relationships between parental incarceration variables and income, occupational prestige, and educational attainment. Mediation effects occur when one variable acts as a mechanism through which an independent variable affects a dependent variable. I used a modified version of Baron and Kenny (1986) and Sobel's (1982) procedures to test for mediating effects. This procedure is presented in Figure 4.2 and Figure 4.3. To test for mediation effects in the relationship between a given parental incarceration variable and a given dependent variable, I first created a model that examined the direct effects of the parental incarceration variable on the mediating variables (path a). Then, I created a model that examined the direct effect of the parental incarceration variable on the dependent variable while controlling for all other variables besides the mediating variable (path c). Next, I created a model that examined the direct effect of the mediating variable on the dependent variable while controlling for all other variables besides the parental incarceration variable (path b). Finally, I created models in which I examined the effects of the parental incarceration variable on the dependent variable while controlling for the mediating variable and all other control variables (path c').

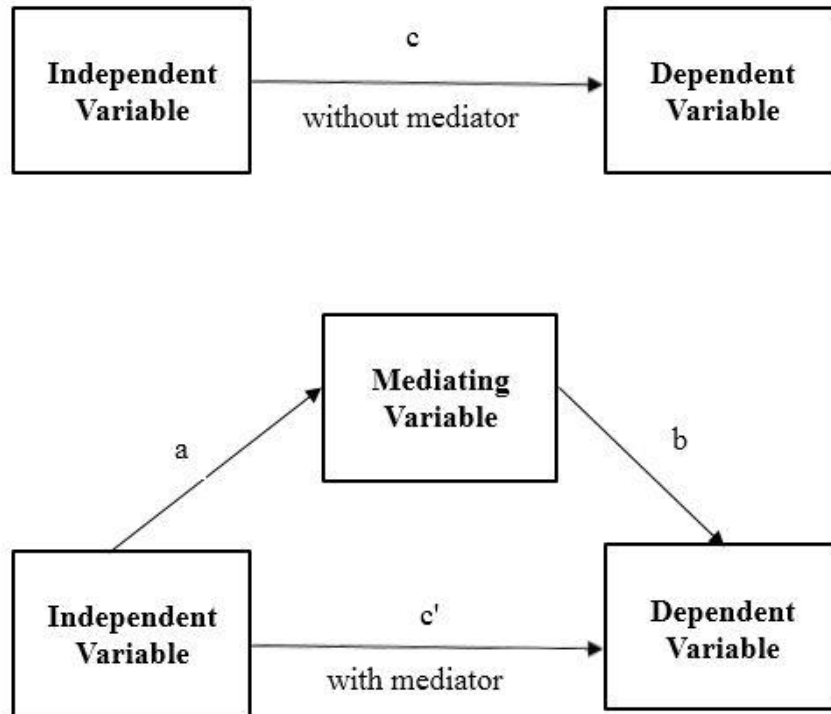


Figure 4.2 Mediation Analysis Diagram

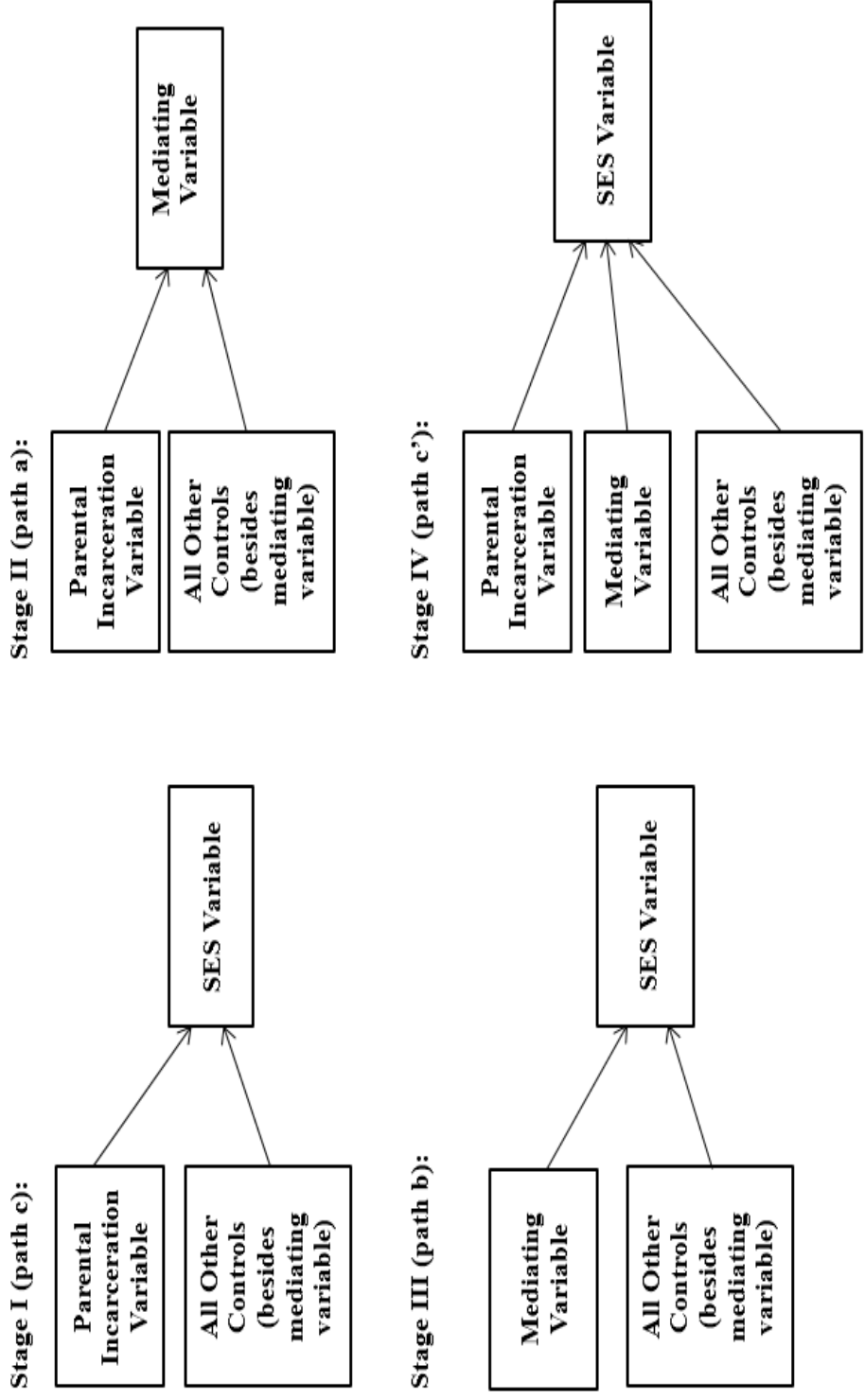


Figure 4.3 Analysis Strategy for Mediating Effects

I used the Sobel (1982) test for significant mediating effects to determine if the effect of the parental incarceration variable on the dependent variable in the model that included the mediating variable included (path c') differed significantly from the effect of the parental incarceration variable on the dependent in the model that did not include the mediating variable.

Tests for Differences by Gender and Race

Finally, I ran separate sets of models using five different sample types. These included: 1) the full sample of all Add Health respondents, 2) a subsample of male respondents, 3) a subsample of female respondents, 4) a subsample of white respondents, and 5) a subsample of black respondents. This allowed me to examine the differential effects of parental incarceration by gender and race. I used the procedure recommended by Paternoster et al. (1998) to test for significant differences in regression coefficients across these different pairings of models.

Weighting and Missing Data

I weighted the data using the grand sample weight provided by Add Health. This weight adjusted for differences in schools in probability of selection for the Add Health sampling frame as well as school ineligibility, nonresponse, and geographic clustering. I also used listwise deletion in my regression models to address missing data. For some variables that had a high rate of missing values, I also used the expectation-maximization algorithm procedure to impute values for missing data. This procedure involved several repetitions of two steps. First, in the "E-step," a series of regression models were used to fill in missing values. Then, in the "M-step," after all of the missing values are filled in,

new parameters were estimated for the variable. These parameters were then used to create new values to replace missing data in the next “E-step.” This process was repeated until the most likely values for the missing data were calculated (Dempster, Laird, and Rubin 1977; Enders 2001).

CHAPTER V

RESULTS

In this chapter, I describe and explain results from the analyses of the effects of parental incarceration on socioeconomic status, intragenerational mobility, and intragenerational mobility. I begin presenting results from tests for bivariate relationships between the primary independent variables, primary dependent variables, moderating variables, mediating variables, demographic variables, and neighborhood contextual variables. Then, I present results from the multivariate analyses of the direct effects, mediating effects, and moderating effects in the relationship between parental incarceration household income, occupational prestige, and educational attainment.

Bivariate Analyses

In this section I describe and explain results from three type of analyses of the bivariate relationships between several of the variables included in this study. I begin by presenting mobility tables that illustrate intergenerational movement of respondents across different SES categories. The tables compare the mobility of respondents who experienced parental incarceration to mobility of respondents who had not experienced parental incarceration. Then, I present Pearson correlations between: parental incarceration variables and the primary dependent variables; all of the mediating, moderating, and control variables and the primary dependent variables; and, parental incarceration variables and the Wave I and Wave IV mediating variables. Finally, I

present results from independent samples t-tests for differences in means (or proportions). I used these tests to determine if the means (or proportions) for the primary independent and dependent variables differed significantly by gender and/or race. I also used them to determine if the means for the primary dependent variables and mediating variables differed significantly by parental incarceration prevalence.

Mobility Tables

I created several mobility tables that show respondents' SES at Wave IV relative to parent or household SES at Wave I. These tables, then, simultaneously depict the levels of intragenerational and intergenerational mobility experienced by Add Health respondents. The tables include cross-tabulations that show what percentage of respondents at a particular level of Wave I/parent SES reported a particular level of SES at Wave IV. In each table and the corresponding description, I juxtapose results from the cross-tabulations for respondents with a history of parental incarceration before a certain point in their life course with results from cross-tabulations for respondents who had not experienced parental incarceration at a certain point in their life course. I also present and compare Chi-square statistics for each cross-tabulation and the coefficients for the Spearman correlations between the parent and respondent variables.

Household Income Mobility

Table 5.1 presents the intergenerational mobility table for household income layered by Wave I PI dummy. To create this table, I first recoded the household income variables to indicate which household income quintiles respondents fell into at Wave I and Wave IV. Each cell in the table indicates the percentage of respondents in a given

Wave I income quintile that reported an income that fell in a given income quintile at Wave IV.

Table 5.1 Household Income Mobility Table Layered by Wave I PI Dummy

		Wave IV Household Income Quintile					
		Bottom Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Top Quintile	
Wave I Household Income Quintile	Bottom Quintile	No Wave I PI	30.0%	33.5%	20.2%	9.5%	6.8%
		Wave I PI	30.1%	36.9%	22.2%	5.7%	5.1%
	Second Quintile	No Wave I PI	17.4%	32.8%	25.6%	15.0%	9.1%
		Wave I PI	23.9%	28.4%	20.2%	18.3%	9.2%
	Middle Quintile	No Wave I PI	15.3%	27.8%	24.7%	18.3%	13.9%
		Wave I PI	14.5%	35.5%	25.0%	13.2%	11.8%
	Fourth Quintile	No Wave I PI	11.9%	25.4%	26.0%	17.5%	19.2%
		Wave I PI	15.1%	28.3%	30.2%	17.0%	9.4%
	Top Quintile	No Wave I PI	8.5%	22.2%	23.2%	17.3%	28.9%
		Wave I PI	17.5%	15.0%	32.5%	17.5%	17.5%
<u>No Wave I PI Subsample</u>			<u>Wave I PI Subsample</u>				
Pearson Chi-Square		272.683***	Pearson Chi-Square		32.743**		
Spearman Correlation		.265***	Spearman Correlation		.202***		
N		3206	N		342		

*p<.05, **p≤.01, ***p≤.001

Table 5.1 shows that most respondents reported a household income at Wave IV that was either in the same quintile as their household income at Wave I or just one quintile above or below. Conversely, a much smaller percentage of respondents moved up or down two or more quintiles from Wave I to Wave IV.

Comparing the distributions for respondents who experienced parental incarceration before Wave I to those who had not, it appears that parent incarceration may have had its greatest effects among respondents in top household income quintiles at Wave I. The Wave IV income distributions for respondents who were in the bottom, second, middle, and fourth quintiles were fairly similar when comparing respondents

with and without a parental incarceration history. However, the differences between respondents who had experienced parental incarceration and those who hadn't were much greater when examining respondents who were in the top income quintiles at Wave I. For example, 28.9 percent of respondents who were in the top income quintile and had experienced parental incarceration before Wave I remained in the top income quintile at Wave IV. However, only 17.5 percent of respondents were in the top income quintile at Wave I and who had experienced parental incarceration remained in the top income quintile at Wave IV. Conversely, while only 8.5 percent of respondents who were in the top income quintile at Wave I and who had no parental incarceration history had moved down to the bottom income quintile at Wave IV, 17.5% of those who were in the top quintile at Wave I and had experienced parental incarceration had moved down to the bottom income quintile at Wave IV.

The statistically significant Chi-square statistics ($\chi^2=272.683$, $p<.001$ for the no Wave I PI subsample; $\chi^2=32.743$, $p<.01$ for the Wave I PI subsample) and Spearman correlation coefficients ($\rho=.265$, $p<.001$ for the no Wave I PI subsample; $\rho=.202$, $p<.001$ for the Wave I PI subsample) reveal that, for both respondents who experienced parental incarceration before Wave I and those who hadn't, there was a reliable positive relationship between Wave I household income and Wave IV household income, and that relationship was not likely due to chance. The correlation between Wave I household income and Wave IV household income was stronger for respondents who had not experienced parental incarceration before Wave I.

Occupational Prestige Mobility

Table 5.2 presents the intergenerational mobility table for occupational prestige layered by Wave I PI dummy. To create this table, I first recoded respondents' occupational prestige scores to indicate which prestige score quintile respondents' fell in at Wave IV. I used the original four-category coding scheme for parental occupational prestige. Each cell in the table indicates the percentage of respondents that fell in a given parent occupational prestige category that reported an occupation with a prestige score that fell in a given quintile at Wave IV.

Table 5.2 Occupational Prestige Mobility Table Layered by Wave I PI Dummy

		Wave IV Occupational Prestige Quintile					
		Bottom Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Top Quintile	
Parent Occupational Prestige Quintile	1	No Wave I PI	28.0%	22.4%	20.6%	14.9%	14.1%
		Wave I PI	31.8%	28.3%	24.3%	8.7%	6.9%
	2	No Wave I PI	22.0%	23.0%	21.6%	19.9%	13.6%
		Wave I PI	26.1%	21.7%	21.7%	19.6%	10.9%
	3	No Wave I PI	17.0%	22.6%	21.3%	20.1%	19.0%
		Wave I PI	21.5%	30.1%	20.4%	14.0%	14.0%
	4	No Wave I PI	10.9%	17.3%	19.7%	23.1%	29.0%
		Wave I PI	21.6%	19.9%	22.8%	19.3%	16.4%
<u>No Wave I PI Subsample</u>		<u>Wave I PI Subsample</u>					
Pearson Chi-Square		197.519***	Pearson Chi-Square		21.742***		
Spearman Correlation		.221***	Spearman Correlation		.217***		
N		3711	N		347		

*p<.05, **p≤.01, ***p≤.001

Table 5.2 shows that Wave IV occupational prestige quintile varied significantly by parental occupational prestige for respondents with and without a parental incarceration history before Wave I. For example, for both of these subgroups, the percentage of respondents who were in the fifth occupational prestige quintile was much

smaller for respondents with the lowest parental occupational prestige than respondents with the highest parental occupational prestige score.

The greatest differences between respondents with and without a parental incarceration history seem to appear when comparing the rates at which those with the lowest of levels of parental occupational prestige reported the highest levels of Wave IV occupational prestige and the rates at which those with the highest levels of parental occupational prestige reported the lowest levels of Wave IV occupational prestige score. About seven percent of respondents who were at the lowest level of parental occupational prestige moved to the highest level of occupational prestige at Wave IV when examining respondents who had experienced parental incarceration before Wave I. However, more than double that percentage moved from the lowest level to the highest level when examining respondents with no parental incarceration history before Wave I. Conversely, the percentage of respondents with the highest level of parental occupational prestige that moved to the lowest level of Wave IV occupational prestige was almost twice as high when comparing respondents who had experienced parental incarceration before Wave IV (21.6 percent) to those who hadn't (10.9 percent).

The statistically significant Chi-square statistics ($\chi^2=197.519$, $p<.001$ for the no Wave I PI subsample; $\chi^2=21.742$, $p<.001$ for the Wave I PI subsample) and Spearman correlation coefficients ($\rho=.221$, $p<.001$ for the no Wave I PI subsample; $\rho=.227$, $p<.001$ for the Wave I PI subsample) reveal that, for both respondents who experienced parental incarceration before Wave I and those who hadn't, there was a reliable positive relationship between parental occupational prestige and Wave IV occupational prestige and that relationship was not likely due to chance. The correlation between parent

occupational prestige and Wave IV occupational prestige was stronger for respondents who had not experienced parental incarceration before Wave I.

Educational Attainment Mobility

Table 5.3 presents the intergenerational mobility table for educational attainment layered by Wave I PI dummy. Each cell in the table indicates the percentage of respondents who reported a given parent educational attainment level at Wave I that reported a given educational attainment level at Wave IV.

Table 5.3 Educational Attainment Mobility Table Layered by Wave I PI Dummy

		Wave IV Educational Attainment							
		1	2	3	4	5	6	7	8
Parent Education	1 No Wave I PI	1.9%	15.5%	0.0%	28.2%	15.5%	27.2%	8.7%	2.9%
	Wave I PI	0.0%	30.0%	0.0%	25.0%	10.0%	30.0%	5.0%	0.0%
	2 No Wave I PI	1.0%	20.3%	0.0%	30.5%	11.2%	27.4%	5.1%	4.6%
	Wave I PI	1.3%	31.6%	0.0%	26.3%	13.2%	22.4%	3.9%	1.3%
	3 No Wave I PI	0.0%	6.7%	0.0%	26.7%	20.0%	33.3%	13.3%	0.0%
	Wave I PI	0.0%	14.3%	0.0%	14.3%	14.3%	57.1%	0.0%	0.0%
	4 No Wave I PI	0.3%	10.2%	0.0%	25.1%	13.6%	34.2%	11.5%	5.2%
	Wave I PI	0.8%	16.0%	0.0%	24.5%	13.5%	37.6%	2.5%	5.1%
	5 No Wave I PI	0.3%	4.2%	0.0%	18.5%	13.2%	35.2%	19.5%	9.1%
	Wave I PI	0.0%	10.7%	0.0%	16.1%	10.7%	41.1%	16.1%	5.4%
	6 No Wave I PI	0.2%	3.8%	0.0%	10.4%	9.6%	40.8%	21.2%	14.0%
	Wave I PI	0.0%	6.3%	0.0%	18.8%	17.5%	33.8%	17.5%	6.3%
	7 No Wave I PI	0.1%	2.7%	0.0%	9.5%	7.2%	34.7%	29.4%	16.4%
	Wave I PI	0.0%	2.5%	0.0%	13.3%	13.3%	46.7%	10.8%	13.3%
	8 No Wave I PI	0.0%	0.9%	0.0%	4.3%	2.7%	20.7%	38.4%	33.0%
	Wave I PI	0.0%	4.1%	0.0%	12.2%	12.2%	40.8%	10.2%	20.4%

No Wave I PI Subsample		Wave I PI Subsample	
Pearson Chi-Square	1045.823***	Pearson Chi-Square	92.361***
Spearman Correlation	.450***	Spearman Correlation	.331***
N	4336	N	470

*p<.05, **p≤.01, ***p≤.001

1=8th grade or less 2=some high school but did not graduate from high school, 3=went to a business, trade, or vocational school (instead of high school), 4=high school graduate/GED, 5=business or vocational/technical training (after high school), 6=some college, 7=completed college (bachelor's degree) 7= professional training beyond a four-year college or university

Table 5.3 shows that Wave IV educational attainment varied significantly by parental educational attainment for respondents with and without a history of parental incarceration before Wave I. For example, for both of these subgroups, the percentages of respondents who had an education level of seven or above (completed college or higher) were much higher among respondents whose parental educational attainment was also seven or above.

Again, the greatest differences between respondents with and without a parental incarceration history seem to appear at the marginal levels of parent and respondent SES. For example, among respondents with no parental incarceration history, 71.4 percent of those whose parents had professional training beyond college had graduated from college themselves by Wave IV. However, among respondents with an incarceration history, only 30.6 percent of those whose parents had professional training beyond college had received a college degree by Wave IV. Conversely, 30 percent of respondents who had experienced parental incarceration and whose parental educational attainment was “eight grade or less” did not finish high school (or an equivalent) whereas only 17.4 percent of their counterparts who had not experienced parental incarceration did not finish high school (or an equivalent).

The statistically significant Chi-square statistics ($\chi^2=1045.843$, $p<.001$ for the no Wave I PI subsample; $\chi^2=92.361$, $p<.01$ for the Wave I PI subsample) and Spearman correlation coefficients ($\rho=.450$, $p<.001$ for the no Wave I PI subsample; $\rho=.331$, $p<.001$ for the Wave I PI subsample) reveal that, for both respondents who experienced parental incarceration before Wave I and those who hadn't, there was a reliable positive relationship between parental educational attainment and Wave IV educational

attainment and that the relationship was not likely due to chance. The correlation between parent educational attainment and Wave IV educational attainment was stronger for respondents who had experienced parental incarceration before Wave I.

Pearson Correlations

In this section, I present the Pearson correlation coefficients for the bivariate relationships between several of the variables I use in my multivariate analyses. Pearson correlations allowed me to assess the linear relationships between the primary dependent variables and all other variables included in my analyses, and the primary independent variables and the mediating variables.

Bivariate Correlations with Primary Dependent Variables

Primary Independent Variables

Table 5.4 presents the bivariate correlations between the primary dependent variables and all other variables analyzed in this study. As shown in this table, all of the parental incarceration dummy variables had a statistically significant negative correlation with all of the primary dependent variables. The correlations between Wave IV PI dummy and the dependent variables ($r=-.112$, $p<.001$ for Wave IV household income; $r=-.116$, $p<.001$ for Wave IV occupational prestige; and $r=-.152$, $p<.001$ for educational attainment) and the correlations between childhood PI dummy and the dependent variables ($r=-.110$, $p<.001$ for Wave IV household income; $r=-.112$, $p<.001$ for Wave IV occupational prestige; and $r=-.154$, $p<.001$ for educational attainment) were stronger than the correlations between Wave I PI dummy and the dependent variables ($r=-.089$, $p<.001$ for Wave IV household income; $r=-.094$, $p<.001$ for Wave IV occupational prestige; and

$r = -.133$, $p < .001$ for educational attainment). All of these correlations demonstrate that having experienced parental incarceration was associated with lower level of socioeconomic status at Wave IV.

Table 5.4 Pearson Correlations Between Primary Dependent Variables Between Primary Dependent Variables and All Other Variables

	Wave IV household income	Wave IV occupational prestige	Wave IV educational attainment
<i>Primary Independent Variables</i>			
Wave I PI dummy	-.089***	-.094***	-.133***
Wave I PI duration	-.014	-.104	.007
Childhood PI dummy	-.110***	-.112***	-.154***
Childhood PI duration	-.012	-.114	.030
Wave IV PI dummy	-.112***	-.116***	-.152***
Wave IV PI duration	-.035	-.095	-.061
<i>Wave IV Mediating Variables</i>			
Wave IV social isolation	-.122***	-.045**	-.007
Wave IV depression	-.172***	-.149***	-.177***
Wave IV anger	-.077***	-.155***	-.168***
Wave IV stress	-.214***	-.179***	-.193***
<i>Wave I Mediating Variables</i>			
Wave I social support	.101***	.094***	.115***
Wave I household income	.204***	.229***	.269***
<i>CJ Contact Mediating Variable</i>			
Adult arrests	-.093***	-.157***	-.227***
<i>Parent SES Controls</i>			
Parent occupational prestige	.179***	.237***	.316***
Parent educational attainment	.192***	.300***	.436***
<i>Demographic Controls</i>			
Male	.071***	-.052***	-.132***
White	.101***	.079***	.049***
Black	-.163***	-.090***	-.040**
Asian	.119***	.065***	.061***
Other race	.011	-.022	-.044**
Hispanic	.012	-.017	-.090***
Age	.046**	.014	-.024
<i>Contextual Variables</i>			
Black neighborhood	-.126***	-.088***	-.051***
Proportion Hispanic	.019	-.010	-.066***
Urban neighborhood	.033*	.052***	.032*
Modal education	.144***	.141***	.207***
Neighborhood poverty	-.220***	-.155***	-.210***

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

Wave I PI duration did not have a statistically significant correlation with any of the primary dependent variables ($r=-.014$, $p>.05$ for Wave IV household income; $r=-.104$, $p>.05$ for Wave IV occupational prestige; and $r=.007$, $p>.05$ for educational attainment), neither did childhood PI duration ($r=-.012$, $p>.05$ for Wave IV household income; $r=-.114$, $p>.05$ for Wave IV occupational prestige; and $r=.030$, $p>.05$ for educational attainment) or Wave IV PI duration ($r=-.035$, $p>.05$ for Wave IV household income; $r=-.095$, $p>.05$ for Wave IV occupational prestige; and $r=-.061$, $p>.05$ for educational attainment).

Wave IV Mediating Variables

All of the correlations between the Wave IV mediating variables and the primary dependent variables were statistically significant and negative except for the correlation between Wave IV social isolation and Wave IV educational attainment ($r=-.007$, $p>.05$). Higher levels of Wave IV social isolation, were typically associated with lower levels of Wave IV household income ($r=-.122$, $p<.001$) and Wave IV occupational prestige ($r=-.045$, $p<.01$). Further, higher levels of Wave IV depression, higher levels of Wave IV anger, and higher levels of Wave IV stress were associated with lower levels of Wave IV household income ($r=-.172$, $p<.001$; $r=-.077$, $p<.001$, and $r=-.214$, $p<.001$, respectively), lower levels of Wave IV occupational prestige ($r=-.149$, $p<.001$; $r=-.155$, $p<.001$; and $r=-.179$, $p<.001$, respectively) and lower levels of Wave IV educational attainment ($r=-.177$, $p<.001$; $r=-.168$, $p<.001$; and $r=-.193$, $p<.001$, respectively).

Wave I and Childhood Mediating Variables

Both of the Wave I mediating variables had a significant positive correlation with Wave IV household income ($r=.101$, $p<.001$ for Wave I social support and $r=.204$, $p<.001$ for Wave I household income), Wave IV occupational prestige ($r=.094$, $p<.001$ for Wave I social support and $r=.229$, $p<.001$ for Wave I household income) and Wave IV educational attainment ($r=.115$, $p<.001$ for Wave I social support and $r=.269$, $p<.001$ for Wave I household income). In general, as Wave I social support and Wave I household income increased, household income, occupational prestige, and educational attainment at Wave IV also increased.

The correlation coefficients for the relationship between adult arrests and Wave IV household income ($r=-.093$, $p<.001$), Wave IV occupational prestige ($r=-.157$, $p<.001$) and Wave IV educational attainment ($r=-.227$, $p<.001$) indicate that increases in adult arrests were significantly associated with decreases in socioeconomic status.

Demographic Variables

Several demographic variables were also significantly correlated with the primary dependent variables. These correlations between the demographic variables and the primary dependent variables revealed that respondents who were male, white, Asian, and older reported significantly higher Wave IV household incomes ($r=.071$, $p<.001$; $r=.101$, $p<.001$; $.119$, $p<.001$; and $r=.046$, $p<.01$, respectively), whereas black respondents reported significantly lower Wave IV household incomes ($r=-.163$, $p<.001$). Neither other race ($r=.011$, $p>.05$) nor Hispanic ($r=.012$, $p>.05$) were significantly correlated with Wave IV household income

Being male and being black was significantly associated with lower levels of Wave IV occupational prestige ($r=-.052$, $p<.001$ and $r=-.090$, $p<.001$ respectively), but being white and being Asian was significantly associated with higher levels of Wave IV occupational prestige ($r=.079$, $p<.001$ and $r=.065$, $p<.001$ respectively). Other race, Hispanic, and age were not significantly correlated with Wave IV occupational prestige.

The dummy variables, male, black, other race and Hispanic had a significant negative correlation with Wave IV educational attainment ($r=-.132$, $p<.001$; $r=-.040$, $p<.01$; $r=-.044$, $p<.01$; and $r=-.090$, $p<.090$, respectively). Thus, those demographic characteristics were significantly associated with lower levels of educational attainment at Wave IV. White status and Asian status were significantly associated with higher levels of educational attainment at Wave IV ($r=.049$, $p<.001$ and $r=.061$, $p<.001$, respectively). There was not a significant correlation between age and Wave IV occupational prestige ($r=.014$, $p<.05$) or Wave IV educational attainment ($r=-.024$, $p>.05$).

There several significant correlations between the contextual variables and Wave IV SES outcomes as well. Living in a neighborhood where the modal racial category was black was significantly associated with lower levels of Wave IV household income ($r=-.126$, $p<.001$), Wave IV occupational prestige ($r=-.088$, $p<.001$), and Wave IV educational attainment ($r=-.051$, $p<.001$). There was significant negative correlation between proportion Hispanic and Wave IV educational attainment ($r=-.066$, $p<.001$) where, as proportion Hispanic increased, Wave IV educational attainment tended to decrease. However, the correlations between proportion Hispanic and Wave IV household income ($r=.019$, $p>.05$) and Wave IV occupational prestige ($r=-.010$, $p>.05$)

were not statistically significant. Having lived in an urban neighborhood at Wave I was significantly associated with higher levels of Wave IV household income ($r=.033$, $p<.05$), lower levels of Wave IV occupational prestige ($r=.052$, $p<.001$), and lower levels of Wave IV educational attainment ($r=.032$, $p<.05$). Modal education had a significant positive correlation with Wave IV household income ($r=.144$, $p<.001$), Wave IV occupational prestige ($r=-.155$, $p<.001$), and Wave IV educational attainment ($r=-.210$, $p<.001$). Respondents who lived in neighborhoods with higher modal education levels at Wave I tended to report higher levels of SES at Wave IV. Finally, the correlations between neighborhood poverty and Wave IV household income ($r=-.220$, $p<.001$), Wave IV occupational prestige ($r=-.155$, $p<.001$), and Wave IV educational attainment ($r=-.210$, $p<.001$) were all statistically significant and negative. Respondents who lived in neighborhoods with lower levels of poverty at Wave I tended to report higher levels of SES at Wave IV.

Bivariate Correlations between Primary Independent Variables and Mediating Variables

Wave I and Childhood Mediating Variables

Table 5.5 displays the bivariate correlations between the Wave I/childhood primary independent variables and the Wave I/childhood mediating variables. Wave I PI dummy was significantly and negatively correlated with both Wave I social support ($r=-.075$, $p<.001$) and Wave I household income ($r=-.087$, $p<.001$). However, Wave I PI duration was not significantly correlated with either variable ($r=-.005$, $p<.05$ and $r=.046$, $p>.05$, respectively). Thus, having experienced parental incarceration before Wave I was significantly associated with lower levels Wave I social support and Wave I household

income. However, among those respondents whose parents had been incarcerated exactly one time before Wave I, the duration of the parental incarceration was not significantly correlated with Wave I household income or Wave I social support.

Table 5.5 Pearson Correlations Between Primary Independent Variables and Wave I and CJ Contact Mediating Variables

	Wave I social support	Wave I household income	Adult arrests
Wave I PI dummy	-.075***	-.087***	
Wave I PI duration	-.005	.046	
Childhood PI dummy			.107***
Childhood PI duration			-.039

*p<.05, **p≤.01, ***p≤.001

Childhood PI dummy was significantly and positively correlated with adult arrests ($r=.107, p<.001$). Respondents who had experienced parental incarceration before age 18 tended to have significantly more arrests after age 18 than respondents who had not experienced parental incarceration before age 18. However, the duration of parental incarceration before age 18 was not significantly correlated with adult arrests ($r=-.039, p>.05$).

The bivariate correlations between the Wave IV mediating variables and the Wave I, childhood, and Wave IV primary independent variables are presented in Table 5.6. All three parental incarceration dummy variables had a significant positive correlation with all four Wave IV mediating variables. There were no significant correlations between the three parental incarceration duration variables and Wave IV social isolation ($r=.042, p>.05$ for Wave I PI dummy; $r=.013, p>.05$ for childhood PI dummy; $r=.039, p>.05$ for Wave IV PI dummy), Wave IV depression ($r=-.011, p>.05$ for

Wave I PI dummy; $r=-.063$, $p>.05$ for childhood PI dummy; $r=.000$, $p>.05$ for Wave IV PI dummy), Wave IV anger ($r=.046$, $p>.05$ for Wave I PI dummy; $r=-.050$, $p>.05$ for childhood PI dummy; $r=.003$, $p>.05$ for Wave IV PI dummy), and Wave IV stress ($r=-.056$, $p>.05$ for Wave I PI dummy; $r=-.103$, $p>.05$ for childhood PI dummy; $r=-.048$, $p>.05$ for Wave IV PI dummy).

Table 5.6 Pearson Correlations Between Primary Independent Variables and Wave IV Mediating Variables

	Wave IV social isolation	Wave IV depression	Wave IV anger	Wave IV stress
Wave I PI dummy	.066***	.101***	.084***	.085***
Wave I PI duration	.042	-.011	.046	-.056
Childhood PI dummy	.076***	.106***	.095***	.095***
Childhood PI duration	.013	-.063	-.050	-.103
Wave IV PI dummy	.064***	.122***	.085***	.102***
Wave IV PI duration	.039	.000	.003	-.048

* $p<.05$, ** $p<.01$, *** $p<.001$

The coefficients for the correlation between Wave I PI dummy and Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress were: $r=.066$, $p<.001$; $r=.101$, $p<.001$; $r=.084$, $p<.001$; and $r=.085$, $p<.001$, respectively. The coefficients for the correlation between childhood PI dummy and Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress were: $r=.076$, $p<.001$; $r=.106$, $p<.001$; $r=.095$, $p<.001$; and $r=.095$, $p<.001$, respectively. The coefficients for the correlation between Wave IV PI dummy and Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress were: $r=.064$, $p<.001$; $r=.122$, $p<.001$; $r=.085$, $p<.001$; and $r=.102$, $p<.001$, respectively. Because these coefficients were all significant and positive, it appears that respondents who had experienced parental incarceration before the three time points examined in this study tended to report higher

levels of social isolation and negative emotions than their counterparts who had not experienced parental incarceration.

Tests for Mean and Proportion Differences

Differences by Gender and Race

Independent Variables

Table 5.7 presents the means and proportions for the primary independent and dependent variables by gender and race. It also presents results from the independent samples t-tests for mean and proportion differences by gender and race. These tests did not reveal any significant mean or proportion difference in the parental incarceration variables by gender. However, they did reveal that there were significant proportion differences by race in Wave I PI dummy, childhood PI dummy, and Wave IV PI dummy. There was a significantly higher proportion of black respondents, compared to white respondents, who reported experiencing parental incarceration before Wave I (.083 for white respondents, .145 for black respondents), before age 18 (.102 for white respondents, .165 for black respondents), and before Wave IV (.116 for white respondents, .184 for black respondents). Although there were significant proportion differences by race in the parental incarceration dummy variables, the independent samples t-tests did not reveal any significant mean differences by race in the incarceration duration variables.

Table 5.7 Results from Independent Samples T-tests for Mean and Proportion Differences in Primary Independent and Dependent Variables by Gender and Race

	Mean (or proportion) by Gender		Mean (or proportion) by Race	
	Male Subsample	Female Subsample	White Subsample	Black Subsample
<i>Primary Independent Variables</i>				
Wave I PI dummy	.097	.098	.083***	.145***
Wave I PI duration	2.421	1.685	1.735	2.575
Childhood PI dummy	.113	.121	.102***	.165***
Childhood PI duration	3.340	2.664	2.648	3.646
Wave IV PI dummy	.125	.139	.116***	.184***
Wave IV PI duration	4.039	3.161	3.175	4.155
<i>Primary Dependent Variables</i>				
Wave IV household income	64836.361***	59022.741***	64625.506***	49753.742***
Wave IV household income (logged)	10.821***	10.705***	10.850***	10.436***
Wave IV occupational prestige	37.008***	38.467***	38.595***	35.569***
Wave IV educational attainment	5.481***	5.912***	5.773**	5.598**

*p<.05, **p<.01, ***p<.001

Dependent Variables

Table 5.7 also indicates that the means for all of the primary dependent variables differed significantly by gender and race. The mean Wave IV household incomes for males (\$64,636.36) and whites (\$64,625.51) were significantly higher than the mean Wave IV household incomes for females (\$59,022.74) and blacks (\$49,753.74), respectively. However, the mean Wave IV occupational prestige score for females (38.467) was significantly higher than the mean Wave IV occupational prestige score for males (37.008). The mean occupational prestige score for whites (38.595) was significantly higher than the mean occupational prestige score for blacks (35.569). On average females reported higher levels of education at Wave IV than males (5.912 and 5,481, respectively) and whites reported higher levels of education at Wave IV than blacks (5.773 and 5.598, respectively).

Differences by Parental Incarceration Prevalence

Dependent Variables

Table 5.8 presents the means for the primary dependent variables and mediating variables by parental incarceration dummy variables. It also presents results from the independent samples t-tests for mean differences by parental incarceration dummy variables. The means for Wave IV household income, Wave IV occupational prestige score, and Wave IV education attainment among those who had experienced parental incarceration before Wave IV (\$50,234.83, 10.509, and 5.100, respectively) were significantly lower than the means for Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment among those who had not experienced parental incarceration before Wave IV (\$63,795.05, 10.804, and 5.825, respectively).

Table 5.8 Results from Independent Samples T-tests for Mean Differences in Primary Dependent Variables and Mediating Variables by Parental Incarceration Dummy Variables

	Mean by Parental Incarceration	
	No PI Before Wave IV	PI Before Wave IV
<i>Primary Dependent Variables</i>		
Wave IV Household Income	63795.050***	50234.831***
Wave IV Household Income (logged)	10.804***	10.509***
Wave IV Occupational Prestige	38.558***	33.820***
Wave IV Educational Attainment	5.825***	5.100***
<i>Wave IV Mediating Variables</i>		
Wave IV Social Isolation	.920***	1.091***
Wave IV Depression	.496***	.679***
Wave IV Anger	2.527***	2.709***
Wave IV Stress	1.171***	1.391***
<hr/>		
	No PI Before Wave I	PI Before Wave I
<i>Wave I Mediating Variables</i>		
Wave I Social Support	4.056***	3.908***
Wave I Household Income	68948.892***	48553.843***
Wave I Household Income (logged)	10.802***	10.319***
<hr/>		
	No PI Before Age 18	PI Before Age 18
<i>CJ Contact Mediating Variable</i>		
Adult Arrests	.449***	1.088***

*p<.05, **p≤.01, ***p≤.001

Mediating Variables

As shown in Table 5.8, the means for Wave IV social isolation, Wave IV depression, Wave IV anger, and Wave IV stress were significantly higher for respondents who experienced parental incarceration before Wave IV (1.091, .679, 2.709, and 1.391, respectively) compared to those who had not (.920, .496, 2.527, and 1.171, respectively). The means for both of the Wave I mediating variables were significantly lower for respondents who had experienced parental incarceration before Wave I. The mean for Wave I social support was 3.908 for respondents who had experienced parental

incarceration, but 4.056 for respondents who hadn't. The mean for Wave I household income was \$48,553.84 for respondents who had experienced parental incarceration, but \$68,948.89 for those who hadn't. Finally, the mean number of adult arrests for respondents who had experienced parental incarceration before age 18 (1.088) was significantly higher than the mean number of adult arrests for those who had experienced incarceration before age 18 (.449).

Multivariate Analyses

Effects of Parental Incarceration on Wave I and CJ Contact Mediating Variables

Effects of Parental Incarceration on Wave I Social Support

Table 5.9 presents survey-corrected ordinary least squares (OLS) regression results for the effects of Wave I PI dummy, parent social class variables, and control variables on Wave I social support. Controlling for other variables in the model, Wave I PI dummy had a significant negative effect on social support in the full sample ($\beta=-.071$, $p<.001$), in the male subsample ($\beta=-.060$, $p<.01$), in the female subsample ($\beta=-.077$, $p<.001$), in the white subsample ($\beta=-.065$, $p<.001$), and in the black subsample ($\beta=-.070$, $p<.05$). The effect of parental incarceration was greater in magnitude for female respondents relative to male respondents and white respondents relative to black respondents. However, the z-tests for equality of coefficients did not reveal any statistically significant differences by gender or race in the effects of Wave I PI dummy.

Table 5.9 Wave I Social Support Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI dummy	-.071***	-.061**	-.077***	-.065***	-.070*
Male	-.036*			-.049**	-.004
White	.145*	.238**	.076		
Black	.129*	.223**	.059		
Asian	.020	.078 ^{GZ}	-.020 ^{GZ}		
Other Race	.058	.103*	.027		
Hispanic	.009	.031	-.010	.005	.011
Age	-.109***	-.116***	-.102***	-.088*** ^{RZ}	-.167*** ^{RZ}
Wave I household income	.003	-.021 ^{GZ}	.030 ^{GZ}	.008	-.025
Parent occ. prestige	.022	.032	.013	.037	.001
Parent education	.041*	.031	.044	.070*** ^{RZ}	-.008 ^{RZ}
Black neighborhood	.009	.015	.004	-.020	.002
Proportion Hispanic	.039*	.021	.050	.046* ^{RZ}	-.033 ^{RZ}
Urban neighborhood	-.029	-.042	-.018	-.031	-.038
Modal education	.029	.022	.033	.023	.005
Neighborhood poverty	.035	.029	.040	.052*	.004
Constant					
N	4766	2186	2580	3169	1101
R ²	.027	.027	.027	.028	.036
Adjusted R ²	.024	.020	.022	.024	.025

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

The results from OLS models regressing Wave I social support on Wave I PI duration, parent social class variables, and all other control variables are presented in Table 5.10. The length of parents' incarceration (among those respondents who had a parent that was incarcerated only once prior to Wave I) did not have a statistically significant effect on social support in the full sample or in any of the four subsamples ($\beta=-.036$, $p>.05$ in the full sample; $\beta=-.125$, $p>.05$ in the male subsample; $\beta=.003$, $p>.05$ in the female subsample; $\beta=-.092$, $p>.05$ in the white subsample; and $\beta=-.059$, $p>.05$ in the black subsample). The z-tests for equality of coefficients revealed that the effects of

Wave IV PI dummy on Wave I social support were not significantly different across the male and female subsamples. The effects were not significantly different across the white and black subsamples, either.

Table 5.10 Wave I Social Support Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI duration	-.036	-.125	.003	-.092	-.059
Male	.017			.014	-.052
White	.241	.173	.311		
Black	.278	.180	.391		
Asian	.020	.000	.050		
Other race	.023	.252	-.050		
Hispanic	.220*	-.016	.294*	.138	.027
Age	-.046	-.089	-.037	.090 ^{RZ}	-.305* ^{RZ}
Wave I household income	.101	.093	.083	.097	.255
Parent occ. prestige	-.104	-.172	-.038	-.081	-.183
Parent education	.022	.136	-.075	-.055	.076
Black neighborhood	-.038	-.073	-.043	-.132	.081
Proportion Hispanic	.045	.255	.009	.085	.101
Urban neighborhood	-.171*	-.362*** ^{GZ}	-.058 ^{GZ}	-.180	-.269
Modal education	.072	.243	-.001	.114	.151
Neighborhood poverty	.048	.219	.019	.029	.173
Constant					
N	254	116	138	149	76
R ²	.079	.178	.093	.082	.210
Adjusted R ²	.017	.064	-.018	.001	.059

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Effects of Parental Incarceration on Wave I Household Income

I also examined the effects of Wave I PI dummy on Wave I household income (logged to reduce skewness). These results are presented in Table 5.11. As shown in Table 5.11, Wave I PI dummy had a significant negative effect on Wave I household

income in the full sample ($\beta=-.056$, $p<.001$), male subsample ($\beta=-.050$, $p<.05$), female subsample ($\beta=-.063$, $p<.001$), white subsample ($\beta=-.036$, $p<.05$), and black subsample ($\beta=-.103$, $p<.001$). Thus, those parents whose children had experienced parental incarceration at some point prior to Wave I reported significantly lower incomes, even when controlling for parent occupational prestige, parent education, and neighborhood context. The effects were greater for females relative to males and blacks relative to whites. However, the z-tests for equality of coefficients did not indicate statistically significant differences by gender or race in the effects of Wave I PI dummy.

Table 5.11 Wave I Household Income Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI dummy	-.056***	-.050*	-.063***	-.036*	-.103***
Male	-.049***			-.044**	-.069*
White	.048	.041	.060		
Black	-.033	-.037	-.025		
Asian	.024	.014	.035		
Other race	.010	.009	.012		
Hispanic	-.021	-.023	-.016	-.024	-.019
Age	-.005	-.002	-.009	-.012	-.003
Parent occ. prestige	.110***	.103***	.119***	.099***	.142***
Parent education	.163***	.142***	.188***	.152***	.170***
Wave I social support	.003	-.019	.025	.008	-.021
Black neighborhood	.015	.024	.006	.044* ^{RZ}	.004 ^{RZ}
Proportion Hispanic	.009	.017	-.001	.009	.002
Urban neighborhood	.029	.039	.019	.027	.040
Modal education	.100***	.092***	.106***	.096***	.107**
Neighborhood poverty	-.114***	-.130***	-.100***	-.096***	-.148***
Constant					
N	4766	2186	2580	3169	1101
R ²	.147	.126	.174	.111	.186
Adjusted R ²	.144	.120	.169	.107	.177

* $p<.05$, ** $p<.01$, *** $p<.001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p<.05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p<.05$ level

The results from the OLS regression models in which Wave I household income was regression on PI duration, parent social class variables, and other control variables are presented in Table 5.12. Wave I PI duration did not have a statistically significant effect in any of the models regressing Wave I household income on it and the control variables ($\beta=.025$, $p>.05$ in the full sample; $\beta=-.049$, $p>.05$ in the male subsample; $\beta=.113$, $p>.05$ in the female subsample; $\beta=-.006$, $p>.05$ in the white subsample; and $\beta=-.042$, $p>.05$ in the black subsample). Once again, the z-tests for equality of coefficients did not indicate any statistically significant differences by gender or race in the effects of Wave I PI duration on Wave I household income.

Table 5.12 Wave I Household Income Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI duration	.025	-.049	.113	.006	.042
Male	-.146*			-.097	-.082
White	-.001	-.044	.080		
Black	-.091	-.058	-.047		
Asian	-.011	.000	.028		
Other race	-.153	-.214	-.098		
Hispanic	.044	.026	.115	.090	.055
Age	.135*	.185*	.050	-.033 ^{RZ}	.316** ^{RZ}
Parent occ. prestige	.012	-.035	.034	.061	-.037
Parent education	.265***	.265*	.246*	.238*	.311*
Wave I social support	.086	.081	.076	.084	.218
Black neighborhood	-.034	-.120	.022	.095 ^{RZ}	-.241 ^{RZ}
Proportion Hispanic	-.020	-.015	-.063	-.047	.113
Urban neighborhood	.074	.073	.092	.046	.184
Modal education	.095	.107	.092	.157	-.044
Neighborhood poverty	-.173*	-.187	-.131	-.153	-.141
Constant					
N	254	116	138	149	76
R ²	.212	.279	.178	.201	.324
Adjusted R ²	.159	.179	.077	.131	.195

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Effects of Parental Incarceration on Criminal Justice Contact

The results from the OLS regression models in which adult arrests were regressed on childhood parental incarceration variables, parent social class variables, and other control variables are presented in Table 5.13 and Table 5.14. As shown in Table 5.13, childhood PI dummy exerted a significant positive effect on adult arrests in all five sample types ($\beta=.092$, $p<.001$ for the full sample; $\beta=.108$, $p<.001$ for males; $\beta=.094$, $p<.001$ for females; $\beta=.082$, $p<.001$; and $\beta=.109$ for blacks). The z-tests for equality of coefficients revealed that while experiencing parental incarceration before age 18 exerted

a positive effect on adult arrests for both males and females, the effect was significantly more pronounced for males. The z-test did not reveal any significant differences by race in the effects of parental incarceration on adult arrests.

Table 5.13 Adult Arrests Regressed on Childhood PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Childhood PI dummy	.092***	.108***GZ	.094***GZ	.082***	.109***
Male	.208***			.196***RZ	.271***RZ
White	-.296***	-.306**GZ	-.377***GZ		
Black	-.244***	-.243**	-.296***		
Asian	-.133***	-.151***GZ	-.139***GZ		
Other race	-.136***	-.150**GZ	-.140**GZ		
Hispanic	-.005	.004	-.024	.004	.028
Age	-.030*	-.041	-.024	-.036*	-.039
Wave I household income	.004	.010	-.013	.004	.002
Parent occ. prestige	-.025	-.043	.012	.000	-.044
Parent education	-.034	-.034	-.064*	-.040	-.028
Wave I social support	-.095***	-.136***GZ	-.051*GZ	-.091***	-.104***
Black neighborhood	-.006	.000	-.029	-.008	-.010
Proportion Hispanic	-.005	.004	-.035	.028	-.016
Urban neighborhood	.014	.024	-.021	-.009RZ	.072*RZ
Modal education	.010	.018GZ	-.005GZ	.026	-.008
Neighborhood poverty	.043*	.073**GZ	-.012GZ	.051*	.035
Constant					
N	4528	2074	2454	3034	1036
R ²	.076	.059	.030	.064	.102
Adjusted R ²	.073	.052	.023	.060	.090

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Table 5.14 Adult Arrests Regressed on Childhood PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Childhood PI duration	-.057	-.133	.004	-.136	.041
Male	.349***			.306***	.350***
White	-.759***	-.803**	-1.355***		
Black	-.483*		-1.027***		
Asian	-.184*	.000	-.426***		
Other race	-.310**	-.268	-.543***		
Hispanic	-.043	-.107	-.016	-.007	.170
Age	-.131*	-.158	-.139	-.044	-.254
Wave I household income	-.069	-.152 ^{GZ}	.174 ^{GZ}	-.015	-.112
Parent occ. prestige	.126	.055	.180	-.025	.116
Parent education	-.201*	-.218	-.222	-.018 ^{RZ}	-.309 ^{RZ}
Wave I social support	-.163*	-.232*	-.120	-.155	-.244
Black neighborhood	.036	.104	-.068	-.076	.148
Proportion Hispanic	-.004	.236 ^{GZ}	-.287 ^{GZ}	.160	.021
Urban neighborhood	-.023	-.141	.023	-.029	-.064
Modal education	-.068	.097	-.239*	-.004	-.006
Neighborhood poverty	-.069	-.153	.090	.013	-.201
Constant					
N	204	93	111	121	59
R ²	.270	.289	.319	.148	.447
Adjusted R ²	.204	.151	.203	.044	.288

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Childhood PI duration did not have a statistically significant effect in any of the models regressing adult arrests on it and the control variables ($\beta=-.051$, $p>.05$ in the full sample; $\beta=-.133$, $p>.05$ in the male subsample; $\beta=.004$, $p>.05$ in the female subsample; $\beta=-.136$, $p>.05$ in the white subsample; and $\beta=-.041$, $p>.05$ in the black subsample). Further, the z-tests for equality of coefficient did not indicate any difference by gender or race in the effects of childhood PI duration on adult arrests.

Effects of Parental Incarceration on Wave IV Mediating Variables

Effects of Parental Incarceration on Wave IV Social Isolation

Table 5.15 presents results from the models regressing Wave IV social isolation on Wave IV PI dummy, parent social class variables, and other control variables. The results from the analyses indicate that, controlling for other variables in the model, Wave IV PI dummy did not have a statistically significant effect on social isolation ($\beta=.013$, $p>.05$ in the full sample; $\beta=-.015$, $p>.05$ in the male subsample; $\beta=.034$, $p>.05$ in the female subsample; $\beta=.007$, $p>.05$ in the white subsample; and $\beta=.047$, $p>.05$ in the black subsample).

Table 5.15 Wave IV Social Isolation Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	.013	-.015 ^{GZ}	.034 ^{GZ}	.007	.047
Male	.024			.023	.012
White	.053	-.010	.107		
Black	.015	-.038	.060		
Asian	.007	-.010	.016		
Other race	.042	.001	.077*		
Hispanic	-.029	.001	-.053*	-.008	-.028
Age	-.012	-.016	-.009	-.021	.017
Wave I household income	.023	.029	.017	.026	.028
Parent occ. prestige	.018	.045*	-.004	.021	-.008
Parent education	.069***	.058*	.079***	.076***	.074*
Wave I social support	-.082***	-.079***	-.085***	-.081***	-.059*
Wave IV depression	.217***	.236*** ^{GZ}	.203*** ^{GZ}	.217***	.205***
Wave IV anger	.044**	.026	.060**	.047**	.057
Wave IV stress	.284***	.293***	.271***	.293***	.259***
Adult arrests	.001	-.002	.010	-.003	.017
Black neighborhood	.007	-.006	.017	-.012	.030
Proportion Hispanic	.001	-.021	.021	-.026	.021
Urban neighborhood	.037**	.046*	.029	.043**	.011
Modal education	.025	.022	.030	.026	.004
Neighborhood poverty	.017	.024	.013	.018	-.013
Constant					
N	4782	2177	2605	3186	1096
R ²	.239	.252	.235	.254	.210
Adjusted R ²	.236	.246	.229	.250	.198

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Regression results for the effects of Wave IV PI duration are presented in Table 5.16. Wave IV PI duration did not have a statistically significant effect on Wave IV social isolation ($\beta=.023$, $p>.05$ in the full sample; $\beta=.011$, $p>.05$ in the male subsample; $\beta=.041$, $p>.05$ in the female subsample; $\beta=-.016$, $p>.05$ in the white subsample; and $\beta=.016$, $p>.05$ in the black subsample). The z-tests for equality of coefficients revealed

that the effects of Wave IV PI duration on Wave IV social isolation were not significantly different across the male and female subsamples. The effects were not significantly different across the white and black subsamples, either.

Table 5.16 Wave IV Social Isolation Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	.023	.011	.041	-.016	.016
Male	.031			.146	-.006
White	-.015	-.098	-.149		
Black	-.028	-.108	-.095		
Asian	-.029	.000	-.048		
Other race	.009	-.214	.054		
Hispanic	-.048	-.027	.032	.113	-.082
Age	-.045	-.044	-.079	-.159*	-.072
Wave I household income	-.015	-.051	.022	-.076	-.120
Parent occ. prestige	-.073	-.083	-.045	.008	-.216
Parent education	.054	.002	.063	.092	.094
Wave I social support	-.146*	-.103	-.168	-.101	-.116
Wave IV depression	.212**	.207	.225*	.193*	.064
Wave IV anger	-.006	.004	.058	.096	-.007
Wave IV stress	.275***	.364**	.227*	.290**	.381*
Adult arrests	-.066	-.030 ^{GZ}	-.226* ^{GZ}	-.037	-.131
Black neighborhood	.068	-.127 ^{GZ}	.211 ^{GZ}	.106	.102
Proportion Hispanic	.131	.020	.076	.015 ^{RZ}	.352** ^{RZ}
Urban neighborhood	-.075	.001	-.134	-.121	-.065
Modal education	.001	-.041	.029	.077	.125
Neighborhood poverty	-.056	-.066	-.018	.063	-.147
Constant					
N	263	119	144	159	75
R ²	.258	.324	.314	.311	.426
Adjusted R ²	.194	.194	.202	.228	.254

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Effects of Parental Incarceration on Wave IV Depression

Table 5.17 presents results from models regressing Wave IV depression on Wave IV PI dummy. Controlling for other variables in the model, Wave IV PI dummy had a significant positive effect on depression in the full sample ($\beta=.034$, $p<.001$), male subsample ($\beta=.053$, $p<.01$), and white subsample ($\beta=.066$, $P<.001$). Wave IV parental incarceration dummy had a significant negative effect ($\beta=-.049$, $p<.05$) on Wave IV depression among respondents in the black subsample. Thus, the observed increase in depression associated with having experienced parental incarceration before Wave IV is .034 SD in the full sample, .052 SD in the male subsample, .066 SD in the white subsample. The observed decrease in depression associated with parental incarceration among black respondents is .049 SD. The z-tests for equality of coefficients revealed that the effect of Wave IV PI dummy on Wave IV depression was significantly different for white respondents compared to black respondents (the effect was significant and positive for whites, but significant and negative for blacks). These tests also revealed that the coefficient for males was not significantly different than the coefficient for females.

Table 5.17 Wave IV Depression Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	.034**	.052**	.015	.066***RZ	-.049*RZ
Male	-.046***			-.050***	-.022
White	.041	.006	.072		
Black	.064	.025	.097		
Asian	.027	.019	.034		
Other race	.025	.010	.038		
Hispanic	.028	.020	.035	.035*	.036
Age	-.018	-.019	-.015	-.008	-.044
Wave I household income	-.005	.015 ^{GZ}	-.024 ^{GZ}	.013 ^{RZ}	-.066* ^{RZ}
Parent occupational prestige	-.013	-.014	-.013	-.001	-.044
Parent education	-.029*	-.021	-.033	-.019	-.058*
Wave I social support	.001	-.002	.006	-.003	.003
Wave IV social isolation	.168***	.192***	.154***	.168***	.156***
Wave IV anger	.152***	.157***	.150***	.151***	.185***
Wave IV stress	.456***	.428*** ^{GZ}	.475*** ^{GZ}	.467***	.438***
Adult arrests	.021	.025	.034*	.017	.028
Black neighborhood	.029	.080*** ^{GZ}	-.008 ^{GZ}	.038*** ^{RZ}	.007 ^{RZ}
Proportion Hispanic	-.02	-.007	-.030	-.036*	-.006
Urban neighborhood	-.005	-.028	.011	-.010	.015
Modal education	-.007	.008	-.020	-.014 ^{RZ}	.024 ^{RZ}
Neighborhood poverty	-.01	-.028	.004	-.028 ^{RZ}	.026 ^{RZ}
Constant					
N	4782	2177	2605	3186	1096
R ²	.411	.393	.420	.424	.399
Adjusted R ²	.408	.388	.416	.421	.390

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Table 5.18 presents the results from models regressing Wave IV depression on Wave IV PI duration. Wave IV parental incarceration duration did not have significant effects on Wave IV depression in any of the sample groups ($\beta = .011$, $p > .05$ in the full sample; $\beta = -.022$, $p > .05$ in the male subsample; $\beta = .003$, $p > .05$ in the female subsample; $\beta = -.027$, $p > .05$ in the white subsample; and $\beta = -.031$, $p > .05$ in the black subsample). The

z-tests for equality of coefficients did not reveal any statistically significant differences by gender or race in the effects of Wave IV PI duration on Wave IV depression.

Table 5.18 Wave IV Depression Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	.011	-.022	.003	-.027	-.031
Male	-.071			-.026	-.105
White	.006	-.168 ^{GZ}	.586 ^{*GZ}		
Black	-.102	-.275 ^{GZ}	.416 ^{GZ}		
Asian	.015	.000	.233 [*]		
Other race	-.002	-.030	.250		
Hispanic	.025	-.080	.074	.076	.037
Age	-.033	.052	-.074	-.047	.037
Wave I household income	-.026	-.044	-.073	.009 ^{RZ}	-.255 ^{*RZ}
Parent occupational prestige	.047	.032	.039	.079	-.060
Parent education	-.001	-.045	.039	-.004	.071
Wave I social support	-.005	.004	-.026	.002	.131
Wave IV social isolation	.154 ^{**}	.157	.163 [*]	.152 [*]	.046
Wave IV anger	.137 ^{**}	.063	.185 [*]	.092	.282 ^{**}
Wave IV stress	.503 ^{***}	.540 ^{***}	.423 ^{***}	.496 ^{***}	.472 ^{***}
Adult arrests	.029	-.035 ^{GZ}	.245 ^{**GZ}	-.097 ^{RZ}	.127 ^{RZ}
Black neighborhood	.107	.132	.103	.180 ^{**RZ}	.096 ^{RZ}
Proportion Hispanic	-.070	.026	-.035	-.009	.041
Urban neighborhood	.037	-.026	.089	.058	.082
Modal education	.047	.102	.062	.070	.040
Neighborhood poverty	-.007	.009	.000	.018	-.137
Constant					
N	263	119	144	159	75
R ²	.461	.486	.503	.457	.591
Adjusted R ²	.414	.387	.422	.392	.469

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Effects of Parental Incarceration on Wave IV Anger

The effects of Wave IV parental incarceration variables on Wave IV anger are presented in Table 5.19 and Table 5.20. These tables reveal that none of the two parental

incarceration variables had a significant effect on anger. The coefficients for Wave IV PI Dummy were $\beta=.019$ ($p>.05$) in the full sample, $\beta=.005$ ($p>.05$) in the male subsample, $\beta=.030$ ($p>.05$) in the female subsample, $\beta=.009$ ($p>.05$) in the white subsample, and $\beta=.027$ ($p>.05$) in the black subsample. The coefficients for Wave IV PI Duration were $\beta=.035$ ($p>.05$) in the full sample, $\beta=.076$ ($p>.05$) in the male subsample, $\beta=-.014$ ($p>.05$) in the female subsample, $\beta=.022$ ($p>.05$) in the white subsample, and $\beta=.099$ ($p>.05$) in the black subsample. The coefficients for Wave IV PI Frequency were $\beta=.038$ ($p>.05$) in the full sample, $\beta=.076$ ($p>.05$) in the male subsample, $\beta=-.005$ ($p>.05$) in the female subsample, $\beta=.022$ ($p>.05$) in the white subsample, and $\beta=.048$ ($p>.05$) in the black subsample. The z-tests for equality of coefficients revealed no significant differences by gender or race in the effects of parental incarceration variables on Wave IV anger in these two sets of models.

Table 5.19 Wave IV Anger Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	.019	.005	.030	.009	.027
Male	-.051***			-.036*	-.086**
White	.032	.146 ^{GZ}	-.062 ^{GZ}		
Black	.002	.100 ^{GZ}	-.078 ^{GZ}		
Asian	-.002	.030	-.020		
Other race	.021	.062	-.013		
Hispanic	-.007	-.017	.001	-.009	-.005
Age	.011	.009	.013	.015	.016
Wave I household income	.004	.029 ^{GZ}	-.024 ^{GZ}	.016 ^{RZ}	-.047 ^{RZ}
Parent occupational prestige	-.028	-.039	-.016	-.049* ^{RZ}	.028 ^{RZ}
Parent education	-.049**	-.070**	-.029	-.078*** ^{RZ}	.007 ^{RZ}
Wave I social support	-.071***	-.068**	-.072***	-.063***	-.072*
Wave IV social isolation	.048**	.030	.065**	.052**	.059
Wave IV depression	.216***	.221***	.213***	.218***	.252***
Wave IV stress	.146***	.124***	.166***	.135***	.095**
Adult arrests	.044**	.067**	.004	.040* ^{RZ}	.105*** ^{RZ}
Black neighborhood	-.029	-.039	-.023	-.014	-.040
Proportion Hispanic	-.028	-.037	-.022	-.029	-.011
Urban neighborhood	-.005	.004	-.013	-.021 ^{RZ}	.045 ^{RZ}
Modal education	-.038*	-.030	-.047*	-.016	-.084*
Neighborhood poverty	-.011	.004	-.026	-.001	-.028
Constant					
N	4782	2177	2605	3186	1096
R ²	.164	.148	.176	.167	.180
Adjusted R ²	.160	.140	.170	.162	.167

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Table 5.20 Wave IV Anger Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	.035	.076	-.014	.022	.099
Male	-.028			-.078	-.015
White	-.004	.291	-.322		
Black	-.041	.172	-.309		
Asian	-.104	.000	-.265		
Other race	.025	.316 ^{GZ}	-.202 ^{GZ}		
Hispanic	-.016	.027	-.129	-.069	-.006
Age	-.037	.058	-.055	.016	-.082
Wave I household income	.048	.060	.056	.135	-.014
Parent occupational prestige	-.107	-.202	-.041	-.138	-.044
Parent education	-.028	.075	-.099	-.075	.005
Wave I social support	-.093	-.150	-.052	-.113	-.147
Wave IV social isolation	-.006	.005	.063	.111	-.009
Wave IV depression	.203**	.092	.275*	.136 ^{RZ}	.467** ^{RZ}
Wave IV stress	.193*	.265*	.104	.164	-.039
Adult arrests	-.009	-.014	.028	-.004	.003
Black neighborhood	-.153	-.129	-.203	-.084	-.168
Proportion Hispanic	-.091	-.099	-.048	-.020	-.061
Urban neighborhood	.004	-.036	.039	.045	-.161
Modal education	-.088	.015	-.155	-.002	-.192
Neighborhood poverty	.004	.171	-.073	.047	-.068
Constant					
N	263	119	144	159	75
R ²	.203	.247	.261	.198	.322
Adjusted R ²	.134	.103	.141	.101	.120

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Effects of Parental Incarceration on Wave IV Stress

Results from the OLS models regressing Wave IV stress on Wave IV PI Dummy and Wave IV PI Duration (and parent social class and other controls) are presented in Table 5.21 and Table 5.22, respectively. Wave IV PI Dummy did not have a significant effect on Wave IV stress in the full sample ($\beta=.010$, $p>.05$), male subsample ($\beta=.004$,

$p > .05$), female subsample ($\beta = .015$, $p > .05$), white subsample ($\beta = -.014$, $p > .05$), or the black subsample ($\beta = .042$, $p > .05$). Likewise, Wave IV PI Duration did not have a significant effect on Wave IV stress in the full sample ($\beta = -.084$, $p > .05$), male subsample ($\beta = -.044$, $p > .05$), female subsample ($\beta = -.121$, $p > .05$), white subsample ($\beta = -.062$, $p > .05$), or the black subsample ($\beta = -.131$, $p > .05$). The coefficients for the effects of Wave IV parental incarceration on Wave IV stress did not differ significantly by gender or race in the models presented in Table 5.21 and Table 5.22.

Table 5.21 Wave IV Stress Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	.010	.004	.015	-.014 ^{RZ}	.042 ^{RZ}
Male	-.031**			-.030*	-.051*
White	-.059	.001	-.103		
Black	-.017	.050	-.068		
Asian	-.003	.029	-.026		
Other race	-.019	.010	-.041		
Hispanic	-.029	-.029	-.031	-.043**	-.005
Age	.007	.023	-.005	-.004	.033
Wave I household income	-.013	-.032	.008	-.021	.013
Parent occupational prestige	-.008	-.007	-.010	-.031 ^{RZ}	.052 ^{RZ}
Parent education	-.042**	-.032	-.053**	-.040*	-.037
Wave I social support	-.080***	-.061***	-.095***	-.089***	-.063*
Wave IV social isolation	.215***	.236***	.199***	.221***	.201***
Wave IV depression	.447***	.425***	.460***	.456***	.446***
Wave IV anger	.101***	.088***	.113***	.091***	.071**
Adult arrests	.015	.031	-.001	.015	.054*
Black neighborhood	-.015	-.042	.007	-.018	-.011
Proportion Hispanic	.002	.002	.002	.036*	-.020
Urban neighborhood	.028*	.029	.029	.028	.035
Modal education	-.004	-.031 ^{GZ}	.017 ^{GZ}	.001	-.040
Neighborhood poverty	.002	.000	.006	.023 ^{RZ}	-.039 ^{RZ}
Constant					
N	4782	2177	2605	3186	1096
R ²	.423	.397	.438	.437	.388
Adjusted R ²	.420	.392	.434	.434	.379

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Table 5.22 Wave IV Stress Regressed on Parent Incarceration Before Wave IV Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	-.084	-.044	-.121	-.062	-.131
Male	-.037			-.093	-.026
White	-.165	-.091	-.134		
Black	-.071	.016	-.077		
Asian	-.026	.000	-.053		
Other race	.006	.059	-.020		
Hispanic	-.062	-.045	-.075	-.154	-.057
Age	.033	.018	.041	.111	.031
Wave I household income	.010	.018	.008	.024	.019
Parent occupational prestige	.043	.107	-.016	-.004	.136
Parent education	-.074	-.097	-.039	-.079	-.025
Wave I social support	-.105*	-.036	-.159*	-.108	-.236*
Wave IV social isolation	.185***	.237**	.170*	.220**	.247*
Wave IV depression	.466***	.463***	.438***	.478***	.431***
Wave IV anger	.121*	.155*	.072	.107	-.022
Adult arrests	.082	.110	.109	.060	.176
Black neighborhood	.027	.104	-.048	-.126 ^{RZ}	.206 ^{RZ}
Proportion Hispanic	.044	.037	.086	.078	.035
Urban neighborhood	-.015	.001	-.011	.001	-.151
Modal education	-.007	.010	-.069	-.071	.038
Neighborhood poverty	-.038	-.074	-.032	-.055	-.097
Constant					
N	263	119	144	159	75
R ²	.502	.559	.486	.477	.627
Adjusted R ²	.458	.475	.402	.414	.516

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Direct and Mediating Effects in the Relationship between Wave I/Childhood Parental Incarceration and Respondent SES variables

Direct Effects of Wave I PI Dummy on Wave IV Household Income

The results from the models regressing Wave IV household income on Wave I PI dummy, parent social class variables, and other controls are presented in Table 5.23.

Wave I PI dummy had a significant negative effect on Wave IV household income in the

full sample ($\beta=-.028, p<.05$). Controlling for other variables in that model, respondents who had experienced parental incarceration before Wave I reported significantly lower Wave IV incomes than those who had not experienced parental incarceration. Wave I PI dummy did not have a significant effect in the male subsample ($\beta=-.037, p>.05$)¹, female subsample ($\beta=-.019, p>.05$), white subsample ($\beta=-.007, p>.05$), and black subsample ($\beta=-.037, p>.05$)². The z-tests for equality of coefficients revealed that the effects of Wave I PI dummy on Wave IV household income among male respondents was not significantly different than the effect among female respondents. The effects of Wave PI dummy did not significantly differ between white and black respondents, either.

¹ Separate analyses revealed that the interaction between Wave I PI dummy and parent education significantly predicted Wave IV household income in the male subsample. Wave PI dummy exerted a significant negative effect on Wave IV household income at the lowest levels of parent education but did not exert a significant effect at the highest levels of parent education. Thus, it appears that parent education had a significant moderating effect in the relationship between Wave I PI dummy and Wave IV household income.

² In the black subsample, Wave I social support had a significant moderating effect in the relationship between Wave I PI dummy and Wave IV household income. Wave I PI dummy had a significant negative effect on Wave IV household income at the lowest levels of Wave I social support and a nonsignificant effect at the highest levels of social support.

Table 5.23 Wave IV Household Income Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI dummy	-.028*	-.037	-.019	-.007	-.037
Male	.052***			.053**	.049
White	-.007	.038	-.030		
Black	-.150**	-.111	-.167*		
Asian	.051*	.076	.038		
Other race	-.002	.029	-.020		
Hispanic	.023	.015	.030	.020	.033
Age	.052***	.032	.070***	.079***RZ	.006RZ
Wave I household income	.108***	.093***GZ	.125***GZ	.092***RZ	.150***RZ
Parent occ. prestige	.037*	.027	.042	.063**	.004
Parent education	.105***	.085***	.120***	.088***	.168***
Wave I social support	.108***	.096***	.116***	.133***	.105***
Black neighborhood	.018	.019	.020	.027	.027
Proportion Hispanic	.075***	.045	.101***	.047*	.052
Urban neighborhood	-.019	.001	-.037	-.028	-.011
Modal education	.012	.007	.015	-.002	.015
Neighborhood poverty	-.125***	-.119***	-.131***	-.108***	-.134***
Constant					
N	4761	2185	2576	3168	1098
R ²	.125	.099	.145	.080	.127
Adjusted R ²	.122	.093	.140	.076	.116

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income

The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI dummy and Wave IV household income are also presented in Table 5.24.

Table 5.24 Direct and Indirect Effects of Wave I PI Dummy on Wave IV Household Income Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	-.007***	-.006*	-.009**	-.009***	-.008*
Path a coefficient	-.070***	-.061**	-.075***	-.066***	-.072*
Path b coefficient	.107***	.097***	.114***	.132***	.104***
Indirect effect	-.007***	-.006*	-.009**	-.009***	-.008*
Direct effect (path c')	-.028*	-.037	-.018	-.007	-.037
Total effect (path c)	-.035*	-.043*	-.027	-.016	-.044
Proportion mediated	.213	.138	.320	.556	.171
<i>Wave I Household Income</i>					
Sobel test	-.006***	-.005*	-.008**	-.003 ^{RZ}	-.015 ^{**RZ}
Path a coefficient	-.055***	-.050*	-.061***	-.036*	-.102***
Path b coefficient	.106***	.092 ^{***GZ}	.125 ^{***GZ}	.091 ^{***RZ}	.145 ^{***RZ}
Indirect effect	-.006***	-.005*	-.008**	-.003 ^{RZ}	-.015 ^{**RZ}
Direct effect (path c')	-.028*	-.037	-.018	-.007	-.037
Total effect (path c)	-.034*	-.042*	-.026	-.010	-.051
Proportion mediated	.175	.111	.295	.324	.288

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

Wave I PI dummy also had a significant negative direct effect on both Wave I social support and Wave I household income in all five sample types. Social support, then, had a positive direct effect on Wave IV household income ($\beta = .107$, $p < .001$ in the full sample; $\beta = .097$, $p < .001$ in the male subsample; $\beta = .114$, $p < .001$ in the female subsample; $\beta = .132$, $p < .001$ in the white subsample; and $\beta = .104$, $p < .001$ in the black subsample). The z-tests for equality of coefficients revealed that the effects of Wave I social support on Wave IV household did not differ significantly by gender or race.

The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV household income was significantly diminished when Wave I social support was added to the models (in all five sample types). This, along with the findings that Wave I PI dummy significantly predict Wave I social support and Wave I social support significantly predict Wave IV household income, confirms that Wave I social support played a significant mediating role in the relationship between Wave I PI dummy and Wave IV household income in all five sample types. The change in β was $-.007$ ($p < .001$) in the full sample, $-.006$ ($p < .05$) in the male subsample, $-.009$ ($p < .01$) in the female subsample, $-.009$ ($p < .001$) in the white subsample, and $-.008$ ($p < .05$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV household income that was mediated by Wave I social support was: $.213$ in the full sample, $.138$ in the male subsample, $.320$ in the female subsample, $.556$ in the white subsample, and $.171$ in the black subsample.

Wave I Household Income

Wave I household income also had a significant positive effect on Wave IV household income ($\beta = .106$, $p < .001$ in the full sample; $\beta = .092$, $p < .001$ in the male subsample; $\beta = .125$, $p < .001$ in the female subsample; $\beta = .091$, $p < .001$ in the white subsample; and $\beta = .145$, $p < .001$ in the black subsample). The z-tests for equality of coefficients revealed that the effect of Wave I household on Wave IV household was significantly more pronounced for females relative to males and for blacks relative to whites.

The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV household income was significantly diminished when Wave I household

income was added to the model. This, along with the findings that Wave I PI dummy significantly predict Wave I household income and Wave I household income significantly predict Wave IV household income, confirms that Wave I household income played a significant mediating role in the relationship between Wave I PI dummy and Wave IV household income in all five sample types. The change in β was $-.006$ ($p < .001$) in the full sample, $-.005$ ($p < .05$) in the male subsample, $-.008$ ($p < .01$) in the female subsample, $-.003$ ($p < .001$) in the white subsample, and $-.015$ ($p < .001$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV household income that was mediated by Wave I household income was: $.175$ in the full sample, $.111$ in the male subsample, $.295$ in the female subsample, $.324$ in the white subsample, and $.288$ in the black subsample.

Direct Effects of Childhood PI Dummy on Wave IV Household Income

The results from the analyses of the direct effects of childhood PI dummy on Wave IV household income are presented in Table 5.25. Childhood PI dummy had a significant negative direct effect on Wave IV household income in the full sample ($\beta = -.046$, $p < .01$), male subsample ($\beta = -.042$, $p < .05$), and female subsample ($\beta = -.046$, $p < .05$). There were no significant differences in these effects by gender or race.

Table 5.25 Direct and Indirect Effects of Childhood PI Dummy on Wave IV Household Income Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	-.010***	-.014***	-.009***	-.008***	-.014**
Path a coefficient	.088***	.105***GZ	.090***GZ	.082***	.094***
Path b coefficient	-.110***	-.138***GZ	-.099***GZ	-.098***RZ	-.149***RZ
Indirect effect	-.010***	-.014***	-.009***	-.008***	-.014**
Direct effect (path c')	-.036**	-.028	-.037*	-.017	-.042
Total effect (path c)	-.046**	-.042*	-.046*	-.025	-.056
Proportion mediated	.211	.341	.196	.328	.248

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship between Childhood PI Dummy and Wave IV Household Income

The results from the tests to determine if adult arrests significantly mediated the relationship between childhood PI dummy and Wave IV household income are also presented in Table 5.25. Childhood PI dummy also had a significant positive direct effect on adult arrests in all five sample types ($\beta = .088$, $p < .001$ in the full sample; $\beta = .105$, $p < .001$ in the male subsample; $\beta = .090$, $p < .001$ in the female subsample; $\beta = .082$, $p < .001$ in the white subsample; and $\beta = .094$, $p < .001$ in the black subsample). The effects of childhood PI dummy were significantly greater in magnitude in the male subsample relative to the female subsample. There were no significant differences in the effects of childhood PI dummy on adult arrests across the white subsample and black subsample.

Adult arrests had a significant negative direct effect on Wave IV household income in all five sample types ($\beta = -.110$, $p < .001$ in the full sample; $\beta = -.138$, $p < .001$ in the male subsample; $\beta = -.099$, $p < .001$ in the female subsample; $\beta = -.098$, $p < .001$ in the

white subsample; and $\beta = -.149$, $p < .001$ in the black subsample). The z-tests for equality of coefficients indicated that these effects were greater among males relative to females and blacks relative to whites.

The Sobel tests revealed that the strength of the effects of childhood PI dummy on Wave IV household income was significantly diminished when adult arrests was added to the models. This, along with the findings that 1) childhood PI dummy significantly predict adult arrests and 2) adult arrests significantly predict Wave IV household income, confirms that adult arrests played a significant mediating role in the relationship between childhood PI dummy and Wave IV household income in all five sample types. The change in β was $-.010$ ($p < .001$) in the full sample, $-.014$ ($p < .001$) in the male subsample, $-.009$ ($p < .001$) in the female subsample, $-.008$ ($p < .001$) in the white subsample, and $-.014$ ($p < .01$) in the black subsample. The proportion of the effect of childhood PI Dummy on Wave IV household income that was mediated by childhood arrests was: .211 in the full sample, .341 in the male subsample, .196 in the female subsample, .324 in the white subsample, and .248 in the black subsample.

Direct Effects of Wave I PI Duration on Wave IV Household Income

The results from OLS models regressing Wave IV household income on Wave I PI duration, parent social class variables, and all other control variables are presented in Table 5.26. The length of parents' incarceration (among those respondents who had a parent that was incarcerated only once prior to Wave I) did not have a statistically significant effect on Wave IV household income in the full sample or in any of the four

subsamples ($\beta=.009$, $p>.05$ in the full sample³; $\beta=-.092$, $p>.05$ in the male subsample; $\beta=.087^4$, $p>.05$ in the female subsample⁵; $\beta=.083$, $p>.05$ in the white subsample⁶; and $\beta=-.116$, $p>.05$ in the black subsample⁷). The z-tests for equality of coefficients revealed that the effects of Wave I PI duration on Wave IV household income did not differ significantly by gender or race.

³ Although Wave I PI duration did not have a significant effect on Wave IV household income overall, separate analyses revealed that the interaction between Wave I PI duration and parent occupational prestige did have a significant effect on Wave IV household income in the full sample. Wave I PI duration exerted a significant positive effect on Wave IV household income at the lowest levels of parent occupational prestige, but a significant negative effect at the highest levels of parent occupational prestige.

⁴ Separate analyses revealed that, in the male subsample, parent occupational prestige and parent education had significant moderating effects in the relationship between Wave I PI duration and Wave IV household income. The effects of Wave I PI duration on Wave IV household income were significant and positive at the lowest levels of occupational prestige, but significant and negative at the lowest levels of occupational prestige. Wave I PI duration exerted a significant negative effect on Wave IV household income at the lowest levels of parent education, but did not exert a significant effect at the highest levels of parent education.

⁵ Wave I social support had a significant moderating effect in the female subsample. The effects of Wave I PI duration on Wave IV household income were significant and negative at the lowest levels of Wave I social support. Those effects were significant and positive at the highest levels of Wave I social support.

⁶ Among white respondents, the effects of Wave I PI duration on Wave IV household income varied significantly by neighborhood poverty level. Those effects were not significant at the lowest levels of neighborhood poverty level, but significant and positive at the highest levels of neighborhood poverty level.

⁷ Wave I household income moderated the effects of Wave I PI duration on Wave IV household income in the black subsample. The effects of Wave I PI duration on Wave IV household income were not significant at the lowest levels of Wave I household income, but were significant and negative at the highest levels of Wave I household income.

Table 5.26 Wave IV Household Income Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI duration	.009	-.092	.087	.083	-.116
Male	.034			.041	-.068
White	.124	-.111 ^{GZ}	.575 ^{GZ}		
Black	-.023	-.292 ^{GZ}	.424 ^{GZ}		
Asian	.072		.222		
Other race	-.058	-.105	.096		
Hispanic	.05	.123	.052	.101	.129
Age	.052	-.102	.203*	.033	-.045
Wave I household income	.05	.124	.004	.028	.243
Parent occ. prestige	-.001	-.048	.049	.131	-.033
Parent education	.254**	.279*	.225*	.216*	.189
Wave I social support	.158*	.185	.126	.185*	.151
Black neighborhood	-.099	-.067	-.114	-.128	-.119
Proportion Hispanic	.092	-.075	.268*	.013	-.138
Urban neighborhood	.114	.192	.010	.025	.281
Modal education	-.053	-.190	.032	-.079	-.185
Neighborhood poverty	-.037	-.070	-.093	.005	-.072
Constant					
N	254	116	138	149	76
R ²	.165	.230	.227	.149	.238
Adjusted R ²	.105	.115	.124	.068	.078

*p<.05, **p<.01, ***p<.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income

The results from the analyses of the direct effects of Wave I PI duration, Wave I social support, and Wave I household income on Wave IV household income are presented in Table 5.27. The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI duration and Wave IV household income are also presented in Table 5.27.

Table 5.27 Direct and Indirect Effects of Wave IV PI Duration on Wave IV Household Income Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	-.006	-.026	.000	-.018	-.009
Path a coefficient	-.036	-.125	.004	-.094	-.056
Path b coefficient	.169*	.205	.129	.192*	.157
Indirect effect	-.006	-.026	.000	-.018	-.009
Direct effect (path c')	.009	-.102 ^{GZ}	.091 ^{GZ}	.088	-.115
Total effect (path c)	.003	-.127 ^{GZ}	.091 ^{GZ}	.070	-.123
Proportion mediated	-1.824	.201	.005	-.258	.071
<i>Wave I Household Income</i>					
Sobel test	.001	-.007	.000	.000	.010
Path a coefficient	.019	-.039	.084	.004	.038
Path b coefficient	.070	.173	.006	.045	.268
Indirect effect	.001	-.007	.000	.000	.010
Direct effect (path c')	.009	-.102	.091	.088	-.115
Total effect (path c)	.011	-.108	.091	.088	-.105
Proportion mediated	.123	.062	.005	.002	-.096

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

As described above, Wave I PI duration did not have a significant direct effect on Wave I social support among respondents who had a parent who was incarcerated only once before Wave I. However, Wave I social support had a significant positive direct effect on Wave IV household income in the full sample ($\beta = .169$, $p < .05$) and white subsample ($\beta = .192$, $p < .05$). It did not have a significant effect on Wave IV household income in the male subsample ($\beta = .205$, $p > .05$), female subsample ($\beta = .129$, $p > .05$), or black subsample ($\beta = .157$, $p > .05$). There were no significant differences by gender or race in the effects of Wave I social support on Wave IV household income in this

set of models. The Sobel tests revealed that the effects of Wave I PI duration on Wave IV household income did not change significantly when Wave I social support was added to the models. The change in β was $-.006$ ($p>.05$) in the full sample, $-.026$ ($p>.05$) in the male subsample, $+.000$ ($p>.05$) in the female subsample, $-.018$ ($p>.05$) in the white subsample, and $-.009$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave I social support in the relationship between Wave I PI duration and Wave IV household income.

Wave I Household Income

Wave I PI duration did not have a significant direct effect on Wave I household income. Wave I household income did not have any significant direct effects on Wave IV household income, either ($\beta=.070$, $p>.05$ in the full sample; $\beta=.173$, $p>.05$ in the male subsample; $\beta=.006$, $p>.05$ in the female subsample; $\beta=.045$, $p>.05$ in the white subsample; and $\beta=.268$, $p>.05$ in the black subsample). These effects did not differ significantly by gender or race.

Wave I household income had no significant mediating effect in the relationship between Wave I PI duration and Wave IV household income, either. The Sobel tests revealed that the effects of Wave I PI duration on Wave IV household income did not change significantly when Wave I household income was added to the models. The change in β was $+.001$ ($p>.05$) in the full sample, $-.007$ ($p>.05$) in the male subsample, $+.000$ ($p>.05$) in the female subsample, $+.000$ ($p>.05$) in the white subsample, and $+.010$ ($p>.05$) in the black subsample.

Direct Effects of Childhood PI Duration on Wave IV Household Income

The results from the analyses of the direct effects of childhood I PI duration and adult arrests on Wave IV household income are presented in Table 5.28. Childhood PI duration did not have a significant direct effect on Wave IV household income or adult arrests in any of the five sample types ($\beta=-.024$, $p>.05$ in the full sample; $\beta=-.132$, $p>.05$ in the male subsample; $\beta=.125$, $p>.05$ in the female subsample; $\beta=.029$, $p>.05$ in the white subsample; and $\beta=-.087$, $p>.05$ in the black subsample).

Table 5.28 Direct and Indirect Effects of Childhood PI Duration on Wave IV Household Income Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	.018	.030	-.002	.020	-.014
Path a coefficient	-.075	-.168	.006	-.135	.068
Path b coefficient	-.240***	-.181 ^{GZ}	-.343*** ^{GZ}	-.152	-.200
Indirect effect	.018	.030	-.002	.020	-.014
Direct effect (path c')	-.042	-.162 ^{GZ}	.127 ^{GZ}	.008	-.073
Total effect (path c)	-.024	-.132	.125	.029	-.087
Proportion mediated	-.757	-.231	-.017	.713	.157

* $p<.05$, ** $p\leq.01$, *** $p\leq.001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p<.05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p<.05$ level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship between Childhood PI Duration and Wave IV Household Income

The results from the tests to determine if adult arrests significantly mediated the relationship between childhood PI duration and Wave IV household income are also presented in Table 5.28. Adult arrests had a significant negative effect on Wave IV household income in the full sample ($\beta=-.240$, $p<.001$) and female subsample ($\beta=-.343$,

$p < .001$). Adult arrests did not have a significant direct effect on Wave IV household income in the male subsample ($\beta = -.181, p > .05$), white subsample ($\beta = -.152, p > .05$), or black subsample ($\beta = -.200, p > .05$).

The tests for mediation revealed that adult arrests had no significant mediating effects in any of the five sample types. Although, adult arrests did have some significant direct effects on Wave IV household income, the Sobel tests revealed that the effects of childhood PI duration on Wave IV household income did not change significantly when adult arrests was entered into the models. The change in β was $+0.018 (p > .05)$ in the full sample, $+0.030 (p > .05)$ in the male subsample, $-0.002 (p > .05)$ in the female subsample, $+0.020 (p > .05)$ in the white subsample, and $-0.014 (p > .05)$ in the black subsample. Thus, there was no apparent significant mediating effect of adult arrests in the relationship between childhood PI duration and Wave IV household income.

Direct Effects of Wave I PI Dummy on Wave IV Occupational Prestige

The results from OLS models regressing Wave IV occupational prestige on Wave I PI dummy, parent social class variables, and all other control variables are presented in Table 5.29. Wave I PI dummy had a significant negative effect on Wave IV occupational prestige in the full sample only ($\beta = -.038, p < .05$)⁸. In the full sample, controlling for other variables in the model, the occupational prestige scores of respondents who had experienced parental incarceration before Wave I were significantly lower than those who hadn't. Wave I PI dummy did not have a significant effect in the male subsample

⁸ The interaction between Wave I PI dummy and parent education also had a significant effect on Wave IV occupational prestige in the full sample. Parent education moderated the effect of Wave I PI dummy such that it had a significant negative effect on Wave IV occupational prestige at the lowest levels of parent education, but a nonsignificant effect at the highest levels of parent education.

($\beta = -.033$, $p > .05$), female subsample ($\beta = -.036$, $p > .05$)⁹, white subsample ($\beta = -.007$, $p > .05$)¹⁰, and black subsample ($\beta = -.052$, $p > .05$). The z-tests for equality of coefficients revealed that the effects of Wave IV PI dummy on Wave IV occupational prestige did not differ significantly across the male and female subsamples. The effects did not differ significantly across the white and black subsamples, either.

⁹ Analyses of the effect of interaction between Wave I PI dummy and urban neighborhood dummy revealed that urban neighborhood dummy significantly moderated the effects of Wave I PI dummy on Wave IV occupational prestige in the female subsample. Wave PI dummy had a significant negative effect on Wave IV occupational among females who lives in nonurban neighborhoods at Wave I, but had a significant positive effect on Wave IV occupational prestige among females who lived in urban neighborhoods at Wave I.

¹⁰ Parent education moderated the effects of Wave I PI dummy on Wave IV occupational prestige in the white subsample. Among white respondents, Wave I PI dummy did not have a significant effect on Wave IV occupational prestige at the lowest levels of parent education, but had a significant negative effect at the highest levels of parent education.

Table 5.29 Wave IV Occupational Prestige Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI dummy	-.035*	-.033	-.036	-.031	-.052
Male	-.069***			-.053**RZ	-.137***RZ
White	.124*	.114	.140		
Black	.054	.021	.087		
Asian	.082**	.108**	.061		
Other race	.036	.025	.050		
Hispanic	.045*	.067*	.027	.025	.026
Age	.046***	.052**	.042*	.054**	.046
Wave I household income	.101***	.106***	.095***	.100***	.084**
Parent occ. prestige	.077***	.087***	.070**	.095***	.043
Parent education	.220***	.218***	.223***	.204***	.284***
Wave I social support	.076***	.057**	.090***	.095***RZ	.043RZ
Black neighborhood	-.006	-.017	.005	-.010	-.003
Proportion Hispanic	.041*	-.006 ^{GZ}	.083*** ^{GZ}	.033	.016
Urban neighborhood	.032*	.040	.023	.035*	.011
Modal education	.014	-.009	.035	.001	.008
Neighborhood poverty	-.024	-.057* ^{GZ}	.001 ^{GZ}	-.024	-.066
Constant					
N	4766	2186	2580	3169	1101
R ²	.132	.144	.125	.124	.161
Adjusted R ²	.129	.138	.120	.121	.151

*p<.05, **p<.01, ***p<.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Occupational Prestige

The results from the analyses of the direct effects of Wave I PI dummy, Wave I social support, and Wave I household income on Wave IV occupational prestige are presented in Table 5.30. The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI dummy and Wave IV occupational prestige are also presented in Table 5.30.

Table 5.30 Direct and Indirect Effects of Wave I PI Dummy on Wave IV Occupational Prestige Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	-.005***	-.003*	-.007**	-.006**	-.003
Path a coefficient	-.070***	-.059**	-.077***	-.066***	-.069*
Path b coefficient	.076***	.057**	.090***	.095***RZ	.044RZ
Indirect effect	-.005***	-.003*	-.007**	-.006**	-.003
Direct effect (path c')	-.035*	-.033	-.036	-.032	-.052
Total effect (path c)	-.040**	-.036	-.043*	-.038*	-.055
Proportion mediated	.132	.094	.164	.165	.055
<i>Wave I Household Income</i>					
Sobel test	-.006***	-.005*	-.006**	-.004*	-.009*
Path a coefficient	-.056***	-.050*	-.062***	-.036*	-.105***
Path b coefficient	.102***	.105***	.097***	.101***	.082**
Indirect effect	-.006***	-.005*	-.006**	-.004*	-.009*
Direct effect (path c')	-.035*	-.033	-.036	-.032	-.052
Total effect (path c)	-.041**	-.038	-.042*	-.035*	-.060*
Proportion mediated	.139	.139	.145	.104	.142

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

As discussed above, Wave I PI dummy had a significant negative direct effect on Wave IV occupational prestige in the full sample and on Wave I social support in all five sample types. Social support, then, had a positive direct effect on Wave IV occupational prestige in the full sample ($\beta = .076$, $p < .001$), male subsample ($\beta = .057$, $p < .01$), female subsample ($\beta = .090$, $p < .001$), and white subsample ($\beta = .095$, $p < .001$). Wave I social support did not have a significant effect on Wave IV occupational prestige in the black subsample ($\beta = .044$, $p > .05$). Z-tests for equality of coefficients revealed that these effects

were significantly more pronounced for whites relative to blacks. These did not reveal significant difference between males and females.

The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV occupational prestige was significantly diminished when Wave I social support was added to the models, thus showing a significant mediation effect. However, a significant mediation effect was only found in the full sample, male subsample, female subsample, and white subsample. This, along with the findings that Wave I PI dummy significantly predicted Wave I social support and Wave I social support significantly predicted Wave IV occupational prestige, confirms that Wave I social support played a significant mediating role in the relationship between Wave I PI dummy and Wave IV occupational prestige in all but the black subsample. The change in β was $-.005$ ($p < .001$) in the full sample, $-.003$ ($p < .05$) in the male subsample, $-.007$ ($p < .01$) in the female subsample, $-.006$ ($p < .01$) in the white subsample, and $-.003$ ($p > .05$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV occupational prestige that was mediated by Wave I social support was: $.132$ in the full sample, $.094$ in the male subsample, $.164$ in the female subsample, $.165$ in the white subsample, and $.055$ in the black subsample.

Wave I Household Income

Wave I household income also had a significant positive direct effect on Wave IV occupational prestige in all five sample types ($\beta = .102$, $p < .001$ in the full sample; $\beta = .105$, $p < .001$ in the male subsample; $\beta = .097$, $p < .001$ in the female subsample; $\beta = .101$, $p < .001$ in the white subsample; and $\beta = .082$, $p < .01$ in the black subsample). There were no significant differences in these coefficients by gender or race.

Table 5.30 also shows that Wave I household income had a significant mediating effect in the relationship between Wave I PI dummy and Wave IV occupational prestige in all five sample types. The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV occupational prestige was significantly diminished when Wave I household income was added to the model. This, along with the findings that Wave I PI dummy significantly predicted Wave I household income and Wave I household income significantly predicted Wave IV occupational prestige, confirms that Wave I household income played a significant mediating role in the relationship between Wave I PI dummy and Wave IV occupational prestige in all five sample types. The change in β was -.010 ($p < .001$) in the full sample, -.005 ($p < .05$) in the male subsample, -.006 ($p < .01$) in the female subsample, -.004 ($p < .05$) in the white subsample, and -.009 ($p < .05$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV occupational prestige income that was mediated by Wave I household income was: .139 in the full sample, .139 in the male subsample, .145 in the female subsample, .104 in the white subsample, and .142 in the black subsample.

Direct Effects of Childhood PI Dummy on Occupational Prestige

The results from the analyses of the direct effects of childhood I PI dummy on Wave IV occupational prestige are presented in Table 5.31. Childhood PI dummy had a significant negative direct effect on Wave IV occupational prestige in the full sample ($\beta = -.039$, $p < .01$), female subsample ($\beta = -.046$, $p < .05$), and white subsample ($\beta = -.035$, $p < .05$). These effects did not differ significantly by gender or race. As described above, it also had a significant positive direct effect on adult arrests in all five sample types (and these effects were more pronounced among males relative to females).

Table 5.31 Direct and Indirect Effects of Childhood PI Dummy on Wave IV Occupational Prestige Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	-.010***	-.013***	-.010***	-.008***	-.015**
Path a coefficient	.089***	.105***GZ	.091***GZ	.083***	.097***
Path b coefficient	-.107***	-.120***GZ	-.108***GZ	-.092***	-.159***
Indirect effect	-.010***	-.013***	-.010***	-.008***	-.015**
Direct effect (path c')	-.030*	-.018	-.036	-.027	-.041
Total effect (path c)	-.039**	-.031	-.046*	-.035*	-.056
Proportion mediated	.242	.409	.217	.219	.274

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

The results from the tests to determine if adult arrests significantly mediated the relationship between childhood PI dummy and Wave IV occupational prestige are also presented in Table 5.31. As indicated above, childhood PI dummy had a significant direct effect on adult arrests. Adult arrests, then, had a significant negative direct effect on Wave IV occupational prestige in all five sample types ($\beta = -.010$, $p < .001$ in the full sample; $\beta = -.013$, $p < .001$ in the male subsample; $\beta = -.010$, $p < .001$ in the female subsample; $\beta = -.008$, $p < .001$ in the white subsample; and $\beta = -.015$, $p < .001$ in the black subsample). The z-tests for equality of coefficients indicate that the negative coefficient for males was significantly greater than the negative coefficient for females. These coefficients did not differ significantly by race.

The Sobel tests revealed that the strength of the effects of childhood PI dummy on Wave IV occupational prestige was significantly diminished when adult arrests was added to the models (in all five sample types). This finding, along with the findings that

1) childhood PI dummy significantly predicts adult arrests and 2) adult arrests significantly predicts Wave IV occupational prestige, confirms that adult arrests played a significant mediating role in the relationship between childhood PI dummy and Wave IV occupational prestige. This mediating effect was found in all five sample types. The change in β when adult arrests was added to the model predict Wave IV occupational prestige was $-.010$ ($p < .001$) in the full sample, $-.013$ ($p < .001$) in the male subsample, $-.010$ ($p < .001$) in the female subsample, $-.008$ ($p < .001$) in the white subsample, and $-.015$ ($p < .001$) in the black subsample. The proportion of the effect of childhood PI Dummy on Wave IV occupational prestige that was mediated by childhood arrests was: $.242$ in the full sample, $.409$ in the male subsample, $.217$ in the female subsample, $.219$ in the white subsample, and $.274$ in the black subsample.

Direct Effects of Wave I PI Duration on Occupational Prestige

Table 5.32 presents the results from OLS models regressing Wave IV occupational prestige on Wave I PI duration, parent social class variables, and all other control variables. Wave I PI duration had a significant negative effect on Wave IV occupational prestige in the male subsample ($\beta = -.234$, $p < .05$)¹¹ and black subsample ($\beta = -.240$, $p < .05$). Wave I PI duration did not have a significant effect in the full sample ($\beta =$

¹¹ In the male subsample, parent education had a significant moderating effect in the relationship between Wave I PI duration and Wave IV occupational prestige. Wave I PI duration did not exert a significant effect at the lowest levels of parent education, but exerted a significant negative effect at the highest levels of parent education. Urban neighborhood also demonstrated a significant moderating role in the relationship between Wave I PI duration and Wave IV occupational prestige. Wave I PI duration did not exert a significant effect on Wave IV occupational prestige among males who did not live in urban neighborhoods at Wave I, but exerted a significant negative effect on Wave IV occupational prestige among males who lived in urban neighborhoods at Wave I.

.119, $p > .05$)¹², female subsample ($\beta = .021$, $p > .05$), or white subsample ($\beta = -.041$, $p > .05$)¹³.

The z-tests for equality of coefficients indicated that the coefficient for the effect of Wave I PI duration Wave IV occupational prestige among male respondent was significantly different than the coefficient for the effect of PI duration among females.

¹² The interaction between Wave I PI duration and parent education did have a significant effect on Wave IV occupational prestige in the full sample. Further, the effect of Wave I PI duration on Wave IV occupational prestige was not significant at the lowest levels of parent education, but was significant and negative at the highest levels of parent education.

¹³ The interaction between Wave I PI duration and urban neighborhood dummy had a significant effect on Wave IV occupational prestige among white respondents. Wave I PI duration had no significant effects on Wave IV occupational prestige among white respondents who did not live in an urban neighborhood at Wave I. Wave I PI duration had a significant negative effect among white respondents who lived in urban neighborhoods at Wave I.

Table 5.32 Wave IV Occupational Prestige Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI duration	-.119	-.234* ^{GZ}	.021 ^{GZ}	-.041	-.240*
Male	.028			.081	-.020
White	.140	.158	.046		
Black	.153	.141	.083		
Asian	.079		.108		
Other race	-.024	-.171	-.011		
Hispanic	.119	.309*	.099	.023	.147
Age	.068	.006	.082	.035	.133
Wave I household income	.054	.120	-.026	.019	.070
Parent occ. prestige	.079	.065	.076	.234* ^{RZ}	-.078 ^{RZ}
Parent education	.197*	.210	.216*	.079	.320*
Wave I social support	.132*	.077	.207*	.183*	-.007
Black neighborhood	.053	.116	.019	.101	-.016
Proportion Hispanic	.215*	.104	.182	.197	.075
Urban neighborhood	.038	.072	.028	.116	.025
Modal education	-.036	-.231 ^{GZ}	.103 ^{GZ}	-.045	-.161
Neighborhood poverty	-.137	-.331* ^{GZ}	-.027 ^{GZ}	-.151	-.183
Constant					
N	254	116	138	149	76
R ²	.166	.284	.148	.200	.216
Adjusted R ²	.106	.177	.036	.122	.051

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave I PI Duration and Wave IV Occupational Prestige

The results from the analyses of the direct effects of Wave I PI duration, Wave I social support, and Wave I household income on Wave IV occupational prestige are presented in Table 5.33. The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI duration and Wave IV occupational prestige are also presented in Table 5.33.

Table 5.33 Direct and Indirect Effects of Wave I PI Duration on Wave IV Occupational Prestige Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	-.004	-.009	.001	-.015	.000
Path a coefficient	-.036	-.125	.004	-.094	-.056
Path b coefficient	.120*	.073	.182*	.162*	-.007
Indirect effect	-.004	-.009	.001	-.015	.000
Direct effect (path c')	-.109	-.223**	.019	-.037 ^{RZ}	-.237* ^{RZ}
Total effect (path c)	-.114*	-.232**	.019	-.052 ^{RZ}	-.236* ^{RZ}
Proportion mediated	.038	.039	.033	.293	-.002
<i>Wave I Household Income</i>					
Sobel test	.001	-.006	-.003	.000	.003
Path a coefficient	.019	-.039	.084	.004	.038
Path b coefficient	.065	.143	-.031	.025	.077
Indirect effect	.001	-.006	-.003	.000	.003
Direct effect (path c')	-.109	-.223** ^{GZ}	.019 ^{GZ}	-.037	-.237*
Total effect (path c)	-.108	-.229** ^{GZ}	.016 ^{GZ}	-.037	-.234*
Proportion mediated	-.011	.025	-.162	-.003	-.012

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

Wave I PI duration did not have any significant direct effects on either Wave I social support. However, Table 5.33 reveals that Wave I social support had a significant positive direct effect on Wave IV occupational prestige in the full sample ($\beta = .120$, $p < .05$), female subsample ($\beta = .182$, $p < .05$), and white subsample ($\beta = .162$, $p < .05$). Wave I social support did not have a significant effect on Wave IV household income in the male subsample ($\beta = .073$, $p > .05$) or black subsample ($\beta = -.007$, $p > .05$). There were no significant differences by gender or race in the strengths of these effects.

The Sobel tests revealed that the effects of Wave I PI duration on Wave IV occupational prestige did not change significantly when Wave I social support was added to the models. The change in β was $-.004$ ($p>.05$) in the full sample, $-.0009$ ($p>.05$) in the male subsample, $+.001$ ($p>.05$) in the female subsample, $-.015$ ($p>.05$) in the white subsample, and $+.000$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave I social support in the relationship between Wave I PI duration and Wave IV occupational prestige.

Wave I Household Income

Wave I PI duration did not have any significant direct effects on Wave household income, either. Wave I household income did not have a significant direct effect on Wave IV occupational prestige ($\beta=.065$, $p>.05$ in the full sample; $\beta=.143$, $p>.05$ in the male subsample; $\beta=-.031$, $p>.05$ in the female subsample; $\beta=.025$, $p>.05$ in the white subsample; and $\beta=.077$, $p>.05$ in the black subsample). The direct effect of Wave I household income on Wave IV occupational prestige did not significantly vary by gender or race, either.

It appears that Wave I household income had no significant mediating effect in the relationship between Wave I PI duration and Wave IV occupational prestige, either. The Sobel tests for this variable revealed that the effects of Wave I PI duration on Wave IV occupational prestige did not change significantly when Wave I household income was added to the models. The change in β was $+.001$ ($p>.05$) in the full sample, $-.006$ ($p>.05$) in the male subsample, $-.003$ ($p>.05$) in the female subsample, $+.000$ ($p>.05$) in the white subsample, and $+.003$ ($p>.05$) in the black subsample.

Direct Effects of Childhood PI Duration on Adult Arrests

The results from the analyses of the direct effects of childhood I PI duration and adult arrests on Wave IV occupational prestige are presented in Table 5.34. Childhood PI duration had a significant negative direct effect on Wave IV occupational prestige in the black subsample only ($\beta = -.317$ ($p < .05$)). It did not have a significant direct effect in the full sample ($\beta = -.107$, $p > .05$), male subsample ($\beta = -.178$, $p > .05$), female subsample ($\beta = -.007$, $p > .05$), and white subsample ($\beta = -.011$, $p > .05$). The z-tests for equality of coefficients reveal that the effects that childhood PI duration exerted on Wave IV occupational prestige were significantly stronger for black respondents relative to white respondents. These tests did not reveal significant differences by gender.

Table 5.34 Direct and Indirect Effects of Childhood PI Duration on Wave IV Occupational Prestige Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	.013	.035	-.001	.004	-.017
Path a coefficient	-.075	-.168	.006	-.135	.068
Path b coefficient	-.176**	-.211*	-.199**	-.030	-.250*
Indirect effect	.013	.035	-.001	.004	-.017
Direct effect (path c')	-.120	-.214*	-.006	-.015 ^{RZ}	-.300* ^{RZ}
Total effect (path c)	-.107	-.178	-.007	-.011 ^{RZ}	-.317* ^{RZ}
Proportion mediated	-.123	-.198	.170	-.371	.054

* $p < .05$, ** $p < .01$, *** $p < .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship between Childhood PI Duration and Wave IV Occupational Prestige

The results from the tests to determine if adult arrests significantly mediated the relationship between childhood PI duration and Wave IV occupational prestige are also presented in Table 5.34. Childhood PI duration had no significant direct effects on adult arrests in any of the five sample types. However, adult arrests, had a significant negative direct effect on Wave IV occupational prestige in the full sample ($\beta=-.176$, $p<.01$), male subsample ($\beta=-.211$, $p<.05$), female subsample ($\beta=-.199$, $p<.01$), and black subsample ($\beta=-.250$, $p<.05$). It did not have a significant direct effect on Wave IV occupational prestige in the white subsample ($\beta=-.030$, $p>.05$). The z-tests reveal that the effects of adult arrests on Wave IV occupational prestige were significantly greater for black respondents relative to white respondents. These tests did not reveal significant difference between male and female respondents in the effects of adult arrests on Wave IV occupational prestige.

Although, adult arrests did have some significant direct effects on Wave IV occupational prestige, the Sobel tests revealed that the strength of the effects of childhood PI duration were not significantly affected when adult arrests was added to the models predicting Wave IV occupational prestige. The change in β was $+.013$ ($p>.05$) in the full sample, $+.035$ ($p>.05$) in the male subsample, $-.001$ ($p>.05$) in the female subsample, $+.004$ ($p>.05$) in the white subsample, and $-.017$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of adult arrests in the relationship between childhood PI duration and Wave IV household income.

Direct Effects of Wave I PI Dummy on Wave IV Educational Attainment

The results from OLS models regressing Wave IV educational attainment on Wave I PI dummy, parent social class variables, and all other control variables are presented in Table 5.35. Wave I PI dummy had a significant negative effect on Wave IV occupational prestige in the full sample ($\beta=-.038$, $p<.001$)¹⁴, male subsample ($\beta=-.076$, $p<.001$), female subsample ($\beta=-.045$, $p<.05$), and white subsample ($\beta=-.077$, $p<.001$)¹⁵. In these sample types, controlling for other variables in the model, the educational attainment levels of respondents who had experienced parental incarceration prior to Wave I were significantly lower than those respondents who hadn't. Wave I PI dummy did not have a significant effect in the black subsample ($\beta=-.021$, $p>.05$). The z-tests for equality of coefficients revealed that the effect of Wave I PI dummy on Wave IV educational attainment was significantly different between white respondents and black respondents. The negative effect was significantly stronger for white respondents. The z-tests did not indicate significant differences by gender.

¹⁴ The interaction between Wave I PI dummy and Wave I social support also had a significant effect on Wave IV educational attainment in the full sample. Wave IV PI dummy had a significant negative effect at the lowest levels of social support, but did not have a significant effect at the highest levels of social support.

¹⁵ The interaction between Wave I PI dummy and the dummy variable, Hispanic, significantly predicted Wave IV education in the white subsample. Wave I PI dummy had a significant negative effect on Wave IV education among white non-Hispanic respondents, but it did not have a significant effect among white Hispanic respondents.

Table 5.35 Wave IV Educational Attainment Regressed on Wave I PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI dummy	-.061***	-.076***	-.045*	-.077***RZ	-.021RZ
Male	-.150***			-.135***RZ	-.223***RZ
White	.136*	.063	.202**		
Black	.102*	-.001	.195**		
Asian	.081***	.075*GZ	.083**GZ		
Other race	.080**	.054	.105**		
Hispanic	-.004	-.006	-.003	.010	-.013
Age	.019	.032	.008	.018	-.005
Wave I household income	.082***	.075***	.092***	.061***	.123***
Parent occ. prestige	.088***	.103***	.077***	.115***RZ	.049RZ
Parent education	.328***	.307***	.357***	.328***	.333***
Wave I social support	.086***	.092***	.084***	.106***RZ	.028RZ
Black neighborhood	.041*	.022	.059*	.020	.048
Proportion Hispanic	.059***	.028	.090***	.044*	.015
Urban neighborhood	-.002	.020	-.024	.005	-.030
Modal education	.057***	.071**	.047*	.063***	.029
Neighborhood poverty	-.064***	-.049*	-.079***	-.061***	-.065
Constant					
N	4766	2186	2580	3169	1101
R ²	.248	.227	.248	.270	.235
Adjusted R ²	.245	.222	.244	.267	.226

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Educational Attainment

The results from the analyses of the direct effects of Wave I PI dummy, Wave I social support, and Wave I household income on Wave IV educational attainment are presented in Table 5.36. The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI dummy and Wave IV educational attainment are also presented in Table 5.36.

Table 5.36 Direct and Indirect Effects of Wave I PI Dummy on Wave IV Educational Attainment Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	-.006***	-.005*	-.006**	-.007**	-.002
Path a coefficient	-.070***	-.059**	-.077***	-.066***	-.069*
Path b coefficient	.085***	.091***	.083***	.105***RZ	.027 ^{RZ}
Indirect effect	-.006***	-.005*	-.006**	-.007**RZ	-.002 ^{RZ}
Direct effect (path c')	-.060***	-.076***	-.044*	-.077***RZ	-.020 ^{RZ}
Total effect (path c)	-.066***	-.081***	-.051**	-.084***RZ	-.022 ^{RZ}
Proportion mediated	.091	.067	.126	.082	.085
<i>Wave I Household Income</i>					
Sobel test	-.005***	-.004*	-.006**	-.002	-.012**
Path a coefficient	-.056***	-.050*	-.062***	-.036*	-.105***
Path b coefficient	.081***	.074***	.092***	.061***RZ	.116***RZ
Indirect effect	-.005***	-.004*	-.006**	-.002 ^{RZ}	-.012**RZ
Direct effect (path c')	-.060***	-.076***	-.044*	-.077***RZ	-.020 ^{RZ}
Total effect (path c)	-.064***	-.079***	-.050**	-.080***RZ	-.033 ^{RZ}
Proportion mediated	.071	.047	.113	.028	.372

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

Table 5.36 indicates that Wave I social support, had a positive direct effect on Wave IV educational attainment in the full sample ($\beta = .085$, $p < .001$), male subsample ($\beta = .091$, $p < .001$), female subsample ($\beta = .083$, $p < .001$), and white subsample ($\beta = .105$, $p < .001$). However, Wave I social support did not have a significant direct effect on Wave IV educational attainment in the black subsample ($\beta = .027$, $p > .05$). According to the z-tests for equality of coefficients, the effect of Wave I social support on Wave IV educational attainment was significantly stronger for white respondents relative to black respondents. However, the z-tests for equality of coefficients did not reveal any

statistically significant differences by gender in the effects of Wave I social support on Wave IV educational attainment.

The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV educational attainment was significantly diminished when Wave I social support was added to the models, thus showing a significant mediation effect. However, a significant mediation effect was only found in the full sample, male subsample, female subsample, and white subsample. This, along with the findings that Wave I PI dummy significantly predicted Wave I social support and Wave I social support significantly predicted Wave IV educational attainment, confirms that Wave I social support played a significant mediating role in the relationship between Wave I PI dummy and Wave IV educational attainment in all but the black subsample. The change in β was $-.006$ ($p < .001$) in the full sample, $-.005$ ($p < .05$) in the male subsample, $-.006$ ($p < .01$) in the female subsample, $-.007$ ($p < .01$) in the white subsample, and $-.007$ ($p > .05$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV occupational prestige that was mediated by Wave I social support was: $.091$ in the full sample, $.067$ in the male subsample, $.126$ in the female subsample, $.082$ in the white subsample, and $.085$ in the black subsample.

Wave I Household Income

Wave I household income also had a significant positive direct effect on Wave IV educational attainment in all five sample types ($\beta = .081$, $p < .001$ in the full sample; $\beta = .074$, $p < .001$ in the male subsample; $\beta = .092$, $p < .001$ in the female subsample; $\beta = .061$, $p < .001$ in the white subsample; and $\beta = .116$, $p < .01$ in the black subsample). The z-tests for equality of coefficients revealed that while Wave I household income exerted a

positive direct effect on Wave IV educational attainment for both whites and blacks, the effect was significantly more pronounced for among black respondents. The z-tests did not reveal any significant differences by gender in the effects of Wave I household income on Wave IV educational attainment.

Table 5.36 shows that Wave I household income had a significant mediating effect in the relationship between Wave I PI dummy and Wave IV educational attainment in all sample types but the white subsample. The Sobel tests revealed that the strength of the effects of Wave I PI dummy on Wave IV educational attainment was significantly diminished when Wave I household income was added to the model. This, along with the findings that Wave I PI dummy significantly predicted Wave I household income and Wave I household income significantly predicted Wave IV educational attainment, confirms that Wave I household income played a significant mediating role in the relationship between Wave I PI dummy and Wave IV educational attainment in all five sample types. The change in β was $-.005$ ($p < .001$) in the full sample, $-.004$ ($p < .05$) in the male subsample, $-.006$ ($p < .01$) in the female subsample, $-.002$ ($p > .05$) in the white subsample, and $-.012$ ($p < .01$) in the black subsample. The proportion of the effect of Wave I PI Dummy on Wave IV educational attainment that was mediated by Wave I household income was: $.071$ in the full sample, $.047$ in the male subsample, $.113$ in the female subsample, $.028$ in the white subsample, and $.372$ in the black subsample.

Direct Effects of Childhood PI Dummy on Wave IV Educational Attainment

The results from the analyses of the direct effects of childhood I PI dummy and adult arrests on Wave IV educational attainment are presented in Table 5.37. The results from the tests to determine if adult arrests significantly mediated the relationship between

childhood PI dummy and Wave IV educational attainment are also presented in Table 5.37. Childhood PI dummy had a significant negative direct effect on Wave IV educational attainment in the full sample ($\beta=-.067$, $p<.001$), male subsample ($\beta=-.070$, $p<.001$), female subsample ($\beta=-.065$, $p<.001$), and white subsample ($\beta=-.076$, $p<.001$). Childhood PI dummy did not have a significant direct effect on Wave IV educational attainment in the black subsample ($\beta=-.038$, $p>.05$). The effects of childhood PI dummy on Wave IV educational attainment did not differ significantly by gender or race.

Table 5.37 Direct and Indirect Effects of Childhood PI Dummy on Wave IV Educational Attainment Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	-.014***	-.021***	-.010***	-.012***	-.017**
Path a coefficient	.089***	.105***GZ	.091***GZ	.083***	.097***
Path b coefficient	-.158***	-.195***GZ	-.109***GZ	-.144***	-.176***
Indirect effect	-.014***	-.021***GZ	-.010***GZ	-.012***	-.017**
Direct effect (path c')	-.053***	-.049*	-.055**	-.064***	-.021
Total effect (path c)	-.067***	-.070***	-.065***	-.076***	-.038
Proportion mediated	.209	.294	.153	.157	.448

* $p<.05$, ** $p\leq.01$, *** $p\leq.001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p<.05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p<.05$ level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship between Childhood PI Dummy and Wave IV Educational Attainment

As described above, childhood PI dummy also had a significant positive direct effect on adult arrests in all five sample types (this effect was significantly more pronounced among males relative to females). Adult arrests, then, had a significant negative direct effect on Wave IV educational attainment in all five sample types ($\beta=-$

.158, $p < .001$ in the full sample; $\beta = -.195$, $p < .001$ in the male subsample; $\beta = -.109$, $p < .001$ in the female subsample; $\beta = -.144$, $p < .001$ in the white subsample; and $\beta = -.176$, $p < .001$ in the black subsample). Adult arrests exerted a significant negative effect on Wave IV educational attainment among both males and females. However, the z-tests for equality of coefficients also revealed that effect adult arrests exerted was significantly stronger for males. The effects of adult arrests on Wave IV educational attainment did not vary significantly by race.

The Sobel tests revealed that, in all five sample types, the strength of the effects of childhood PI dummy was significantly diminished when adult arrests was added to the models predicting Wave IV educational attainment. This finding, along with the findings that 1) childhood PI dummy significantly predicts adult arrests and 2) adult arrests significantly predicts Wave IV occupational prestige, confirms that adult arrests played a significant mediating role in the relationship between childhood PI dummy and Wave IV occupational prestige. This mediating effect was found in all five sample types. The change in β when adult arrests was added to the model predict Wave IV occupational prestige was $-.014$ ($p < .001$) in the full sample, $-.021$ ($p < .001$) in the male subsample, $-.010$ ($p < .001$) in the female subsample, $-.012$ ($p < .001$) in the white subsample, and $-.017$ ($p < .01$) in the black subsample. The proportion of the effect of childhood PI Dummy on Wave IV occupational prestige that was mediated by childhood arrests was: .209 in the full sample, .294 in the male subsample, .153 in the female subsample, .157 in the white subsample, and .448 in the black subsample.

Direct Effects of Wave I PI Duration on Wave IV Educational Attainment

Table 5.38 presents the results from OLS models regressing Wave IV educational attainment on Wave I PI duration, parent social class variables, and all other control variables are presented in Table 5.38. Wave I PI duration had a did not have a significant effect on Wave IV educational attainment in any of the five sample ($\beta=-.021$, $p>.05$ in the full sample; $\beta=.038$, $p>.05$ in the male subsample; $\beta=-.081$, $p>.05$ in the female subsample; $\beta=.055$, $p>.05$ in the white subsample; and $\beta=-.150$, $p>.05$ in the black subsample)¹⁶. The z-tests for equality of coefficients indicated that the coefficients for the effect of Wave I PI duration did not vary significantly by gender or race.

¹⁶ In both the full sample and male subsample, the interaction between Wave I PI duration and black neighborhood dummy significantly predicted Wave IV educational attainment. In both of the samples, Wave I PI duration had a nonsignificant effect on Wave IV educational attainment among respondents who lived in neighborhoods without a majority black population at Wave I, but it had a significant negative effect among respondents who lived in neighborhoods with a majority black population at Wave I. Neighborhood poverty level also moderated the effects of Wave I PI duration in the male subsample. Wave I PI duration exerted a nonsignificant effect on Wave IV educational attainment among male respondents who lived in neighborhoods with the lowest levels of poverty at Wave I, but it had a significant negative among male respondents who lived in neighborhoods with the highest levels of poverty at Wave I.

Table 5.38 Wave IV Educational Attainment Regressed on Wave I PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave I PI duration	-.021	.038	-.081	.055	-.150
Male	-.166**			-.088 ^{RZ}	-.364** ^{RZ}
White	.079	.034	.182		
Black	.131	-.058	.332		
Asian	.103		.188		
Other race	-.124	-.096	-.136		
Hispanic	.170	.245	.144	.141	.011
Age	.079	-.033	.134	.016	.165
Wave I household income	.088	.168	.045	.086	.025
Parent occ. prestige	.028	.201 ^{GZ}	-.061 ^{GZ}	.166	-.048
Parent education	.293***	.192	.324**	.158	.301*
Wave I social support	-.012	.060	-.082	-.031	-.012
Black neighborhood	.009	.085	-.015	.139	.069
Proportion Hispanic	.061	.028	.029	-.020	-.101
Urban neighborhood	.043	-.015	.128	.147 ^{RZ}	-.125 ^{RZ}
Modal education	.014	-.043	.036	.011	.124
Neighborhood poverty	-.083	-.108	-.056	-.042	-.147
Constant					
N	254	116	138	149	76
R ²	.172	.202	.242	.156	.390
Adjusted R ²	.112	.082	.141	.075	.262

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave I PI Dummy and Wave IV Household Income

The results from the analyses of the direct effects of Wave I PI duration, Wave I social support, and Wave I household income on Wave IV educational attainment are presented in Table 5.39. The results from the tests to determine if Wave I social support and Wave I household income significantly mediated the relationship between Wave I PI duration and Wave IV educational attainment are also presented in Table 5.39.

Table 5.39 Direct and Indirect Effects of Wave I PI Duration on Wave IV Educational Attainment Using Wave I Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave I Social Support</i>					
Sobel test	.000	-.008	.000	.003	.001
Path a coefficient	-.036	-.125	.004	-.094	-.056
Path b coefficient	-.012	.065	-.079	-.032	-.012
Indirect effect	.000	-.008	.000	.003	.001
Direct effect (path c')	-.021	.041	-.081	.056	-.140
Total effect (path c)	-.021	.033	-.081	.059	-.140
Proportion mediated	-.022	-.244	.003	.050	-.005
<i>Wave I Household Income</i>					
Sobel test	.002	-.009	.005	.001	.001
Path a coefficient	.019	-.039	.084	.004	.038
Path b coefficient	.118	.231	.061	.133	.026
Indirect effect	.002	-.009	.005	.001	.001
Direct effect (path c')	-.021	.041	-.081	.056	-.140
Total effect (path c)	-.019	.032	-.076	.057	-.139
Proportion mediated	-.118	-.279	-.067	.010	-.007

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

Wave I Social Support

As described above, Wave I PI duration did not have a significant direct effect on Wave I social support or Wave IV educational attainment among respondents who had a parent who was incarcerated only once before Wave I. Further, Wave I social support did not have any significant effects on Wave IV educational attainment ($\beta = -.012$, $p > .05$ in the full sample; $\beta = .065$, $p > .05$ in the male subsample; $\beta = -.079$, $p > .05$ in the female subsample; $\beta = -.032$, $p > .05$ in the white subsample; and $\beta = -.012$, $p > .05$ in the black subsample). The direct effects of Wave I social support on Wave IV educational did not vary significantly by gender or race.

The Sobel tests revealed that the effects of Wave I PI duration on Wave IV educational attainment did not change significantly when Wave I social support was added to the models. The change in β was +.000 ($p>.05$) in the full sample, -.008 ($p>.05$) in the male subsample, +.000 ($p>.05$) in the female subsample, +.003 ($p>.05$) in the white subsample, and +.001 ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave I social support in the relationship between Wave I PI duration and Wave IV educational attainment.

Wave I Household Income

Wave I PI duration did not have any significant direct effects on Wave I household income among respondents who had a parent who was incarcerated only once before Wave I. Wave I household income did not have any significant direct effects on Wave IV educational attainment, either ($\beta=.118$, $p>.05$ in the full sample; $\beta=.231$, $p>.05$ in the male subsample; $\beta=.061$, $p>.05$ in the female subsample; $\beta=.133$, $p>.05$ in the white subsample; and $\beta=.026$, $p>.05$ in the black subsample). The direct effects of Wave I household income on Wave IV educational did not vary significantly by gender or race.

Wave I household income had no apparent significant mediating effect in the relationship between Wave I PI duration and Wave IV educational attainment, either. The Sobel tests revealed that the effects of Wave I PI duration on Wave IV education attainment did not change significantly when Wave I household income was added to the models. The change in β was +.002 ($p>.05$) in the full sample, -.009 ($p>.05$) in the male subsample, +.005 ($p>.05$) in the female subsample, +.001 ($p>.05$) in the white subsample, and +.001 ($p>.05$) in the black subsample.

Direct Effects of Childhood PI Duration on Wave IV Educational Attainment

The results from the analyses of the direct effects of childhood PI duration and adult arrests on Wave IV educational attainment are presented in Table 5.40. As described above, childhood PI duration did not have a significant direct effect on Wave IV educational attainment or adult arrests in any of the five sample types ($\beta=.025$, $p>.05$ in the full sample; $\beta=.116$, $p>.05$ in the male subsample; $\beta=-.109$, $p>.05$ in the female subsample; $\beta=.558$, $p>.05$ in the white subsample; and $\beta=.110$, $p>.05$ in the black subsample).

Table 5.40 Direct and Indirect Effects of Childhood PI Duration on Wave IV Educational Attainment Using Adult Arrests as Mediating Variable

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Adult Arrests</i>					
Sobel test	.022	.065	-.001	.048	-.011
Path a coefficient	-.075	-.168	.006	-.135	.068
Path b coefficient	-.294***	-.386***	-.218**	-.354***	-.158
Indirect effect	.022	.065	-.001	.048	-.011
Direct effect (path c')	.003	.051	-.107	.038	-.087
Total effect (path c)	.025	.116	-.109	.085	-.098
Proportion mediated	.873	.559	.013	.558	.110

* $p<.05$, ** $p\leq.01$, *** $p\leq.001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p<.05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p<.05$ level

Parent SES variables and all other control variables included in models, but not presented

Tests for Mediation in the Relationship Between childhood PI Duration and Wave IV Educational Attainment

The results from the tests to determine if adult arrests significantly mediated the relationship between childhood PI duration and Wave IV educational attainment are also presented in Table 5.40. Adult arrests had a significant negative effect on Wave IV

educational attainment in the full sample ($\beta=-.294$, $p<.001$), male subsample ($\beta=-.386$, $p<.001$), female subsample ($\beta=-.218$, $p<.01$), and white subsample ($\beta=-.354$, $p<.001$). Adult arrests did not have a significant direct effect on Wave IV educational attainment in the black subsample ($\beta=-.158$, $p>.05$). The z-tests for equality of coefficients indicated that the gender and racial variation in the direct effects of adult arrests on Wave IV educational attainment was not statistically significant.

Although, adult arrests did have some significant direct effects on Wave IV educational attainment, the Sobel tests revealed that the effects of childhood PI duration on Wave IV educational attainment did not change significantly when adult arrests was entered into the models. The change in β was $+.022$ ($p>.05$) in the full sample, $+.065$ ($p>.05$) in the male subsample, $-.001$ ($p>.05$) in the female subsample, $+.048$ ($p>.05$) in the white subsample, and $-.011$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of adult arrests in the relationship between childhood PI duration and Wave IV household income in any of the five sample types.

Direct and Mediating Effects in the Relationship between Wave IV Parental Incarceration and Respondent SES

Direct Effects of Wave IV PI Dummy on Wave IV Household Income

The results from the models regressing Wave IV household income on Wave IV PI Dummy, parent social class variables, other control variables are presented in Table 5.41. Wave IV PI Dummy did not exert a significant effect on Wave IV household income in any the models ($\beta=-.019$, $p>.05$ in the full sample; $\beta=-.017$, $p>.05$ in the male

subsample; $\beta = -.017$, $p > .05$ in the female subsample¹⁷; $\beta = -.010$, $p > .05$ in the white subsample¹⁸; and $\beta = -.020$, $p > .05$ in the black subsample). The z-tests for equality of coefficients revealed that the effects of Wave IV PI dummy on Wave IV household income were not significantly different across the male and female subsamples. These tests revealed that the effects were not significantly different across the white and black subsamples, either.

¹⁷ Separate analyses revealed that the interaction between Wave IV PI dummy and Wave IV depression significantly predicted Wave IV household income in the female subsample. Wave PI dummy did not exert a significant effect on Wave IV household income at the lowest levels of Wave IV depression, but it exerted a significant negative effect at the highest levels of Wave IV depression. Thus, it appears that Wave IV depression had a significant moderating effect in the relationship between Wave I PI dummy and Wave IV household income among females.

¹⁸ The interaction between Wave IV PI dummy and urban neighborhood significantly predicted Wave IV household income in the black subsample. Wave IV PI dummy exerted a significant negative effect on Wave IV household income among black respondents who lived in nonurban neighborhoods at Wave I, but did not exert a significant effect among black respondents who lived in urban neighborhoods at Wave I.

Table 5.41 Wave IV Household Income Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	-.019	-.017	-.017	-.010	-.020
Male	.057***			.055**	.074*
White	-.026	.021	-.056		
Black	-.150**	-.099	-.181**		
Asian	.050*	.078*	.034		
Other race	-.002	.025	-.017		
Hispanic	.017	.015	.017	.017	.037
Age	.047***	.031	.062***	.071***RZ	.006 ^{RZ}
Wave I household income	.105***	.093***GZ	.118***GZ	.091***RZ	.132***RZ
Parent occ. prestige	.029	.022	.033	.059***RZ	-.014 ^{RZ}
Parent education	.096***	.079**	.106***	.084***	.158***
Wave I Social Support	.054***	.039	.065***	.078***	.054
Wave IV social isolation	-.056***	-.051*	-.059**	-.066***	-.056
Wave IV depression	-.078***	-.064*	-.085***	-.041 ^{RZ}	-.136*** ^{RZ}
Wave IV anger	.022	.025	.017	.047* ^{RZ}	-.029 ^{RZ}
Wave IV stress	-.110***	-.140***GZ	-.086***GZ	-.135***	-.058
Adult arrests	-.095***	-.113***GZ	-.089***GZ	-.090***	-.104***
Black neighborhood	.019	.019	.019	.027	.017
Proportion Hispanic	.068***	.034 ^{GZ}	.095***GZ	.046*	.043
Urban neighborhood	-.006	.015	-.027	-.019	.025
Modal education	.010	-.004	.019	.000	-.003
Neighborhood poverty	-.114***	-.108***	-.123***	-.098***	-.121***
Constant					
N	4777	2176	2601	3185	1093
R ²	.170	.150	.187	.126	.184
Adjusted R ²	.166	.142	.180	.121	.171

*p<.05, **p<.01, ***p<.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Household Income

The results from the analyses of the direct effects of Wave IV PI dummy, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV household income are presented in Table 5.42. The results from the tests to

determine if Wave IV social isolation, and Wave IV depression, Wave IV anger, and/or Wave IV stress significantly mediated the relationship between Wave IV PI dummy and Wave IV household income are also presented in Table 5.42. As indicated in previous results tables, Wave IV PI dummy did not have significant direct effects on Wave IV household income, Wave IV social isolation, Wave IV anger, or Wave IV stress using any of the five sample types. It did, however, exert a significant positive direct effect on Wave IV depression in all samples but the female subsample.

Table 5.42 Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Household Income Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	-.001	.001	-.002	.000	-.002
Path a coefficient	.013	-.015 ^{GZ}	.034 ^{GZ}	.007	.045
Path b coefficient	-.056***	-.051*	-.058**	-.066***	-.055
Indirect effect	-.001	.001 ^{GZ}	-.002 ^{GZ}	.000	-.002
Direct effect (path c')	-.019	-.017	-.017	-.010	-.020
Total effect (path c)	-.020	-.016	-.019	-.010	-.022
Proportion mediated	.035	-.049	.102	.047	.113
<i>Wave IV Depression</i>					
Sobel test	-.003*	-.003	-.001	-.003	.006
Path a coefficient	.034**	.053**	.016	.066*** ^{RZ}	-.045 ^{RZ}
Path b coefficient	-.077***	-.063*	-.084***	-.041 ^{RZ}	-.138*** ^{RZ}
Indirect effect	-.003*	-.003	-.001	-.003 ^{RZ}	.006 ^{RZ}
Direct effect (path c')	-.019	-.017	-.017	-.010	-.020
Total effect (path c)	-.022	-.020	-.019	-.012	-.013
Proportion mediated	.120	.165	.073	.219	-.461
<i>Wave IV Anger</i>					
Sobel test	.000	.000	.001	.000	-.001
Path a coefficient	.020	.005	.032	.009	.027
Path b coefficient	.021	.025	.016	.046* ^{RZ}	-.029 ^{RZ}
Indirect effect	.000	.000	.001	.000	-.001
Direct effect (path c')	-.019	-.017	-.017	-.010	-.020
Total effect (path c)	-.019	-.017	-.017	-.009	-.020
Proportion mediated	-.023	-.008	-.031	-.047	.038
<i>Wave IV Stress</i>					
Sobel test	-.001	.000	-.001	.002	-.002
Path a coefficient	.009	.003	.014	-.014 ^{RZ}	.040 ^{RZ}
Path b coefficient	-.109***	-.139*** ^{GZ}	-.084*** ^{GZ}	-.134***	-.058
Indirect effect	-.001	.000	-.001	.002	-.002
Direct effect (path c')	-.019	-.017	-.017	-.010	-.020
Total effect (path c)	-.020	-.017	-.018	-.008	-.022
Proportion mediated	.046	.028	.066	-.236	.106

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

Wave IV Social Isolation

Wave IV social isolation had a significant negative direct effect in all samples but the black subsample ($\beta=-.056$, $p<.001$ in the full sample; $\beta=-.051$, $p<.05$ in the male subsample; $\beta=-.058$, $p<.01$ in the female subsample; $\beta=-.066$, $p<.001$ in the white subsample; and $\beta=-.055$, $p>.05$ in the black subsample). The z-tests for equality of coefficients indicated that these effects did not differ significantly by gender or race.

The Sobel tests for mediation revealed that the effects of Wave IV PI dummy did not change significantly when Wave IV social isolation was added to the models predicting Wave IV household income. The change in β was $-.001$ ($p>.05$) in the full sample, $-.001$ ($p>.05$) in the male subsample, $-.002$ ($p>.05$) in the female subsample, $+.000$ ($p>.05$) in the white subsample, and $-.002$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV social isolation in the relationship between Wave IV PI dummy and Wave IV household income.

Wave IV Depression

Wave IV depression had a significant negative direct effect in all samples but the white subsample ($\beta=-.077$, $p<.001$ in the full sample; $\beta=-.063$, $p<.05$ in the male subsample; $\beta=-.084$, $p<.001$ in the female subsample; $\beta=-.041$, $p>.05$ in the white subsample; and $\beta=-.138$, $p<.001$ in the black subsample). The z-tests for equality of coefficients indicated that the effect of Wave IV depression on Wave IV household income were significantly more pronounced among black respondents relative to white respondents. These effects did not differ significantly by gender.

It appears that Wave IV depression had a significant mediating effect in the relationship between Wave IV PI dummy and Wave IV household income, but only when

analyzing the full sample. The coefficient for the effect of Wave IV PI dummy on Wave IV household income dropped significantly when Wave IV depression was added to the model. The change in β was $-.003$ ($p < .05$). About 12.0 percent of the effect of Wave IV PI dummy on Wave IV household income was mediated by Wave IV depression. The Sobel tests did not reveal significant mediating effects in any of the other sample types. The change in β was $-.003$ ($p > .05$) in the male subsample, $-.001$ ($p > .05$) in the female subsample, $-.003$ ($p > .05$) in the white subsample, and $+.006$ ($p > .05$) in the black subsample.

Wave IV Anger

Wave IV anger had a significant positive direct effect when analyzing the white subsample but not when analyzing any of the other sample types ($\beta = .021$, $p > .05$ in the full sample; $\beta = .025$, $p > .05$ in the male subsample; $\beta = .016$, $p > .05$ in the female subsample; $\beta = .046$, $p < .05$ in the white subsample; and $\beta = -.029$, $p > .05$ in the black subsample). The z-tests for equality of coefficients indicated that the effects of Wave IV anger on Wave IV household income for white and black respondents were significantly different. They did not reveal significant differences by gender, though.

The Sobel tests for mediation revealed that Wave IV anger did not play a significant mediating role in the relationship between Wave IV PI dummy and Wave IV household income in any of the five sample types. The coefficient for the effect of Wave IV PI dummy on Wave IV household income did not change significantly when Wave IV anger was added to the models. The change in β was $+.000$ ($p > .05$) in the full sample, $+.000$ ($p > .05$) in the male subsample, $+.001$ ($p > .05$) in the female subsample, $+.000$ ($p > .05$) in the white subsample, and $-.001$ ($p > .05$) in the black subsample.

Wave IV Stress

Wave IV stress exerted a significant negative direct effect in all samples but the black subsample ($\beta=-.109$, $p<.001$ in the full sample; $\beta=-.139$, $p<.001$ in the male subsample; $\beta=-.084$, $p<.001$ in the female subsample; $\beta=-.134$, $p<.001$ in the white subsample; and $\beta=-.058$, $p>.05$ in the black subsample). The z-tests for equality of coefficients revealed that while Wave IV stress exerted a significant negative direct effect for both males and females, the effect was significantly more pronounced among male respondents. The z-test did not reveal any significant differences by race in the effects of Wave IV stress on Wave IV household income.

Wave IV stress did not have a significant mediating effect in the relationship between Wave IV PI dummy and Wave IV household income, either. The change in the B coefficient for Wave IV PI dummy when Wave IV stress was added to the models predicting Wave IV household income was $-.001$ ($p>.05$) in the full sample, $+.000$ ($p>.05$) in the male subsample, $-.002$ ($p>.05$) in the female subsample, $+.002$ ($p>.05$) in the white subsample, and $-.002$ ($p>.05$) in the black subsample.

Direct Effects of Wave IV PI Duration on Wave IV Household Income

The results from the models regressing Wave IV household income on Wave IV PI duration, parent social class variables, and other control variables are presented in Table 5.43. The effects of Wave IV PI Duration on Wave IV household income were not statistically significant in any the models ($\beta=-.023$, $p>.05$ in the full sample¹⁹; $\beta=-$

¹⁹ Parent occupational prestige significantly moderated the effect of Wave IV PI duration on Wave IV household income in the full sample, male subsample, and black subsample. In all three of these sample types, Wave IV PI duration exerted a significant effect on Wave IV household income at the lowest levels of parent occupational prestige, but had a significant negative effect on Wave IV household income at the highest levels parent occupational prestige.

.150, $p > .05$ in the male subsample; $\beta = -.111$, $p > .05$ in the female subsample²⁰; $\beta = -.029$, $p > .05$ in the white subsample; and $\beta = -.025$, $p > .05$ in the black subsample²¹). The z-tests for equality of coefficients revealed that the effect of Wave IV PI duration among males was significantly stronger than the effect of Wave IV PI duration for females (even though neither were statistically significant themselves). The z-test did not reveal any significant differences by race in the effects of Wave IV PI duration.

²⁰ The interaction between Wave IV PI duration and Wave IV stress had a significant effect on Wave IV household income among female respondents. Analyses of the effects of Wave IV PI duration on Wave IV household income at different levels of Wave IV stress revealed that it had a nonsignificant effect at the lowest levels, but a significant negative effect at the highest levels.

Table 5.43 Wave IV Household Income Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	-.023	-.150 ^{GZ}	.111 ^{GZ}	.029	-.025
Male	.079			.067	.063
White	-.034	-.273	-.002		
Black	-.167	-.392	-.107		
Asian	.019	.000	.008		
Other race	-.118	-.235	-.131		
Hispanic	.063	.149	.063	.114	.208
Age	.051	-.089 ^{GZ}	.143 ^{GZ}	.032	-.008
Wave I Household Income	.022	.095	.008	.032	.207
Parent occupational prestige	.040	.018	.083	.172	-.031
Parent education	.209**	.207	.179	.198*	.148
Wave I social support	.035	.109	-.012	.095	.051
Wave IV social isolation	-.039	-.133	-.018	-.153 ^{RZ}	.220 ^{RZ}
Wave IV depression	-.156*	-.014	-.159	-.163	-.131
Wave IV anger	-.060	.082	-.130	-.016	-.001
Wave IV stress	-.068	-.071	-.063	.015	-.112
Adult arrests	-.187**	-.159 ^{GZ}	-.277** ^{GZ}	-.129	-.209
Black neighborhood	-.037	-.019	-.097	-.068	-.161
Proportion Hispanic	.139	-.025	.180	.103	-.190
Urban neighborhood	.099	.177	.031	.011 ^{RZ}	.318** ^{RZ}
Modal education	-.051	-.211	-.012	-.036	-.251
Neighborhood poverty	-.088	-.156	-.111	-.031	-.045
Constant					
N	263	119	144	159	75
R ²	.241	.245	.384	.218	.302
Adjusted R ²	.172	.090	.278	.117	.078

*p<.05, **p<.01, ***p<.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave IV PI duration and Wave IV Household Income

The results from the analyses of the direct effects of Wave IV PI duration, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV household income are presented in Table 5.44. The results from the tests to

determine if Wave IV social isolation, and Wave IV depression, Wave IV anger, and/or Wave IV stress significantly mediated the relationship between Wave IV PI duration and Wave IV household income are also presented in Table 5.44.

Table 5.44 Direct and Indirect Effects of Wave IV PI Duration on Wave IV Household Income Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	-.001	-.002	-.001	.003	.004
Path a coefficient	.025	.012	.044	-.016	.017
Path b coefficient	-.040	-.138	-.018	-.162	.201
Indirect effect	-.001	-.002	-.001	.003	.004
Direct effect (path c')	-.025	-.163 ^{GZ}	.118 ^{GZ}	.031	-.025
Total effect (path c)	-.026	-.164 ^{GZ}	.118 ^{GZ}	.034	-.021
Proportion mediated	.038	.010	-.007	.078	-.165
<i>Wave IV Depression</i>					
Sobel test	-.002	.000	-.001	.005	.004
Path a coefficient	.013	-.027	.004	-.033	-.033
Path b coefficient	-.141*	-.013	-.146	-.144	-.123
Indirect effect	-.002	.000	-.001	.005	.004
Direct effect (path c')	-.025	-.163 ^{GZ}	.118 ^{GZ}	.031	-.025
Total effect (path c)	-.027**	-.162 ^{GZ}	.118 ^{GZ}	.036	-.021
Proportion mediated	.070	-.002	-.005	.132	-.193
<i>Wave IV Anger</i>					
Sobel test	-.002	.007	.002	.000	.000
Path a coefficient	.037	.078	-.015	.022	.104
Path b coefficient	-.061	.086	-.129	-.017	-.001
Indirect effect	-.002	.007	.002	.000	.000
Direct effect (path c')	-.025	-.163 ^{GZ}	.118 ^{GZ}	.031	-.025
Total effect (path c)	-.027	-.156 ^{GZ}	.120 ^{GZ}	.031	-.025
Proportion mediated	.083	-.043	.016	-.012	.006
<i>Wave IV Stress</i>					
Sobel test	.006	.003	.008	-.001	.015
Path a coefficient	-.091	-.051	-.125	-.065	-.148
Path b coefficient	-.067	-.067	-.065	.015	-.098
Indirect effect	.006	.003	.008	-.001	.015
Direct effect (path c')	-.025	-.163 ^{GZ}	.118 ^{GZ}	.031	-.025
Total effect (path c)	-.019	-.159 ^{GZ}	.127 ^{GZ}	.030	-.010
Proportion mediated	-.325	-.021	.064	-.033	-1.421

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

As indicated in previous results tables, when examining respondents who had a parent incarcerated only once before Wave IV, Wave IV PI duration did not have

significant direct effects on Wave IV household income, Wave IV social isolation, Wave IV depression, Wave IV anger, or Wave IV stress in any of the five sample types. Aside from Wave IV depression's negative effect on household income in the full sample, none of the Wave IV mediating variables had a significant direct effect on Wave IV household income (among respondents who had a parent incarcerated only once before Wave IV). The z-tests for equality of coefficients did not reveal any significant differences by gender or race in the direct effects of any of the mediating variables on Wave IV household income.

Wave IV Social Isolation

The β coefficients for the direct effects of Wave IV social isolation on Wave IV household income were: $-.040$ ($p > .05$) in the full sample, $-.138$ ($p > .05$) in the male subsample, $-.018$ ($p > .05$) in the female subsample, $-.162$ ($p > .05$) in the white subsample, and $-.201$ ($p > .05$) in the black subsample. The Sobel tests for mediation revealed that the effects of Wave IV PI duration on Wave IV household income did not change significantly when Wave IV social isolation was added to the models predicting Wave IV household income. The change in β was $-.001$ ($p > .05$) in the full sample, $-.002$ ($p > .05$) in the male subsample, $-.001$ ($p > .05$) in the female subsample, $+.003$ ($p > .05$) in the white subsample, and $+.004$ ($p > .05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV social isolation in the relationship between Wave IV PI duration and Wave IV household income.

Wave IV Depression

The β coefficients for the direct effects of Wave IV depression on Wave IV household income were: $-.141$ ($p < .05$) in the full sample, $-.013$ ($p > .05$) in the male subsample, $-.146$ ($p > .05$) in the female subsample, $-.144$ ($p > .05$) in the white subsample, and $-.123$ ($p > .05$) in the black subsample. Wave IV depression did not have a significant mediating effect in the relationship between Wave IV PI duration and Wave IV household income. The Sobel tests revealed that the change in β when Wave IV depression was added to the models predicting Wave IV household income was not statistically significant. The changes in B was $-.002$ ($p < .05$) in the full sample, $+.000$ ($p > .05$) in the male subsample, $+.005$ ($p > .05$) in the female subsample, $-.005$ ($p > .05$) in the white subsample, and $+.004$ ($p > .05$) in the black subsample.

Wave IV Anger

The β coefficients for the direct effects of Wave IV anger on Wave IV household income were: $-.061$ ($p > .05$) in the full sample, $-.086$ ($p > .05$) in the male subsample, $-.129$ ($p > .05$) in the female subsample, $-.017$ ($p > .05$) in the white subsample, and $-.001$ ($p > .05$) in the black subsample. The Sobel tests for mediation revealed that Wave IV anger did not play a significant mediating role in the relationship between Wave IV PI duration and Wave IV household income in any of the five sample types. The coefficient for the effect of Wave IV PI duration on Wave IV household income did not change significantly when Wave IV anger was added to the models. The change in β was $-.002$ ($p > .05$) in the full sample, $+.007$ ($p > .05$) in the male subsample, $+.002$ ($p > .05$) in the female subsample, $+.000$ ($p > .05$) in the white subsample, and $+.000$ ($p > .05$) in the black subsample.

Wave IV Stress

The β coefficients for the direct effect of Wave IV stress on Wave IV household income were: $-.067$ ($p>.05$) in the full sample, $-.067$ ($p>.05$) in the male subsample, $-.065$ ($p>.05$) in the female subsample, $-.015$ ($p>.05$) in the white subsample, and $-.098$ ($p>.05$) in the black subsample. Wave IV stress did not have a significant mediating effect in the relationship between Wave IV PI duration and Wave IV household income, either. The change in the B coefficient for Wave IV PI duration when Wave IV stress was added to the models predicting Wave IV household income was $+.006$ ($p>.05$) in the full sample, $+.003$ ($p>.05$) in the male subsample, $+.008$ ($p>.05$) in the female subsample, $-.001$ ($p>.05$) in the white subsample, and $+.015$ ($p>.05$) in the black subsample.

Direct Effects of Wave IV PI Dummy on Wave IV Occupational Prestige

The results from the models regressing Wave IV occupational prestige on Wave IV PI dummy, parent social class variables, other control variables are presented in Table 5.45. The results in this table indicate that Wave IV PI Dummy did not have a significant effect on Wave IV occupational prestige in any of the models ($\beta=-.021$, $p>.05$ in the full sample²²; $\beta=-.009$, $p>.05$ in the male subsample²³; $\beta=-.026$, $p>.05$ in the female

²² Significant moderation effects were found for adult arrests, parent education, and neighborhood poverty level in the full sample. Wave IV PI dummy had a significant negative effect on Wave IV occupational prestige at low levels of adult arrests, but a significant positive effect at high levels of adult arrests. Wave IV PI dummy had a nonsignificant effect on Wave IV occupational prestige at low levels of parent education, but a significant positive effect at high levels of parent education. Wave IV PI dummy had significant negative effect on Wave IV occupational prestige at the lowest levels of neighborhood poverty, but a nonsignificant effect at the highest levels of neighborhood poverty level.

²³ Among males, adult arrests significantly moderated the effects such that Wave IV PI dummy exerted a nonsignificant effect on Wave IV occupation prestige at the lowest levels of adult arrests, but a significant positive effect at the highest levels of adult arrests. Parent education also moderated the effects such that Wave IV PI dummy had a significant positive effect on Wave IV occupational prestige at low levels of parent education, but a significant negative effect at high levels of parent education.

subsample²⁴; $\beta=-.025$, $p>.05$ in the white subsample²⁵; and $\beta=-.024$, $p>.05$ in the black subsample²⁶). The z-tests for equality of coefficients indicated that these effects did not differ significantly by gender or race.

²⁴ Among females, Wave IV stress, Wave I household income, and urban neighborhood moderated the effects of Wave IV PI dummy on Wave IV occupational prestige. Wave IV PI dummy had a significant negative effect on Wave IV occupational prestige among female respondents who reported the lowest levels of stress at Wave IV, but did not exert a significant effect among female respondents who reported the highest levels of stress at Wave IV. Wave PI dummy did not exert a significant effect on Wave IV occupational prestige among females who reported the lowest household incomes at Wave I, but exerted a significant positive effect on Wave IV occupational prestige among females who reported the highest household incomes at Wave I. Wave IV PI dummy exerted a significant negative effect on Wave IV occupational prestige among female respondents who resided in nonurban neighborhoods at Wave I, but exerted no significant effects among female respondents who resided in urban neighborhoods at Wave I.

²⁵ Parent education significantly moderated the effects of Wave IV PI dummy on Wave IV occupational prestige among white respondents such that Wave PI dummy had a significant positive effect at the lowest levels of parent education, but a nonsignificant effect at the highest levels of parent education.

²⁶ Wave I household income significantly moderated the effects of Wave I PI dummy on Wave IV occupational prestige among black respondents such that Wave I PI dummy exerted a significant positive effect at low levels of Wave I household income, but a significant negative effect at high levels of Wave I household income.

Table 5.45 Wave IV Occupational Prestige Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	-.021	-.009	-.026	-.025	-.024
Male	-.067***			-.055***RZ	-.117***RZ
White	.103	.103	.105		
Black	.046	.026	.065		
Asian	.077**	.108**	.055		
Other race	.033	.028	.044		
Hispanic	.040*	.064*	.018	.023	.031
Age	.044**	.051*	.038*	.050**	.051
Wave I Household Income	.100***	.105***	.092***	.101***	.077*
Parent occupational prestige	.069***	.079***	.060**	.084***	.039
Parent education	.203***	.199***	.205***	.189***RZ	.264***RZ
Wave I Social Support	.040**	.026	.048*	.063***RZ	-.003RZ
Wave IV social isolation	.024	.055*GZ	.000GZ	.024	.008
Wave IV depression	-.020	-.043	.000	-.025	.016
Wave IV anger	-.078***	-.057**	-.097***	-.069***	-.114***
Wave IV stress	-.100***	-.103***	-.098***	-.100***	-.111**
Adult arrests	-.081***	-.087***GZ	-.089***GZ	-.072***	-.108***
Black neighborhood	-.010	-.018	-.001	-.013	-.013
Proportion Hispanic	.034	-.018GZ	.077**GZ	.028	.011
Urban neighborhood	.038**	.046*	.028	.039*	.036
Modal education	.008	-.017	.029	-.002	-.011
Neighborhood poverty	-.019	-.051*	.003	-.015	-.067
Constant					
N	4782	2177	2605	3186	1096
R ²	.162	.173	.161	.154	.197
Adjusted R ²	.158	.165	.155	.149	.183

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Occupational Prestige

The results from the analyses of the direct effects of Wave IV PI dummy, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV occupational prestige Table 5.46. The results from the tests to determine if

Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress significantly mediated the relationship between Wave IV PI dummy and Wave IV occupational prestige are also presented in Table 5.46.

Table 5.46 Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Occupational Prestige Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	.000	-.001	.000	.000	.000
Path a coefficient	.013	-.015 ^{GZ}	.034 ^{GZ}	.007	.046
Path b coefficient	.025	.055* ^{GZ}	.000 ^{GZ}	.024	.008
Indirect effect	.000	-.001	.000	.000	.000
Direct effect (path c')	-.021	-.009	-.026	-.025	-.024
Total effect (path c)	-.021	-.010	-.027	-.025	-.023
Proportion mediated	-.015	.080	.000	-.006	-.015
<i>Wave IV Depression</i>					
Sobel test	-.001	-.002	.000	-.002	-.001
Path a coefficient	.034**	.053**	.015	.066*** ^{RZ}	-.049* ^{RZ}
Path b coefficient	-.020	-.043	.000	-.025	.016
Indirect effect	-.001	-.002	.000	-.002	-.001
Direct effect (path c')	-.021	-.009	-.026	-.025	-.024
Total effect (path c)	-.022	-.012	-.027	-.027	-.024
Proportion mediated	.031	.192	.000	.062	.032
<i>Wave IV Anger</i>					
Sobel test	-.002	.000	-.003	-.001	-.003
Path a coefficient	.020	.005	.030	.009	.027
Path b coefficient	-.078***	-.057**	-.097***	-.069***	-.113***
Indirect effect	-.002	.000	-.003	-.001	-.003
Direct effect (path c')	-.021	-.009	-.026	-.025	-.024
Total effect (path c)	-.023	-.010	-.029	-.025	-.027
Proportion mediated	.067	.031	.100	.024	.115
<i>Wave IV Stress</i>					
Sobel test	-.001	.000	-.002	.001 ^{RZ}	-.005 ^{RZ}
Path a coefficient	.010	.004	.015	-.014 ^{RZ}	.042 ^{RZ}
Path b coefficient	-.101***	-.104***	-.098***	-.100***	-.113**
Indirect effect	-.001	.000	-.002	.001 ^{RZ}	-.005 ^{RZ}
Direct effect (path c')	-.021	-.009	-.026	-.025	-.024
Total effect (path c)	-.022	-.010	-.028	-.023	-.028
Proportion mediated	.043	.045	.054	-.059	.167

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

As indicated in previous results tables, Wave IV PI dummy did not have significant direct effects on Wave IV occupational prestige, Wave IV social isolation,

Wave IV anger, or Wave IV stress using any of the five sample types. It did, however, significantly predict Wave IV depression in all samples but the female subsample. This effect was positive in the full sample, male subsample, and white subsample, but negative in the black subsample. Many of the mediating variables had a significant direct effect on Wave IV occupational prestige and displayed a significant mediating effect in the relationship between Wave I PI dummy and Wave IV occupational prestige.

Wave IV Social Isolation

Wave IV social isolation had a significant negative direct effect on Wave IV occupational prestige when analyzing the male subsample ($\beta=.025$, $p>.05$ in the full sample; $\beta=.055$, $p<.05$ in the male subsample; $\beta=.000$, $p>.05$ in the female subsample; $\beta=.024$, $p>.05$ in the white subsample; and $\beta=.008$, $p>.05$ in the black subsample). The z-tests for equality of coefficients indicated that the effect of Wave IV social isolation on Wave IV occupational prestige were significantly more pronounced among male respondents relative to female respondents. These tests also revealed that the effects of Wave IV social isolation did not differ significantly by race.

The Sobel tests for mediation revealed that the effects of Wave IV PI dummy did not change significantly when Wave IV social isolation was added to the models predicting Wave IV occupational prestige. The change in β was $+.000$ ($p>.05$) in the full sample, $-.001$ ($p>.05$) in the male subsample, $+.000$ ($p>.05$) in the female subsample, $+.000$ ($p>.05$) in the white subsample, and $+.000$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV social isolation in the relationship between Wave IV PI dummy and Wave IV occupational prestige.

Wave IV Depression

Wave IV depression did not have a significant direct effect on Wave IV occupational prestige in any of the sample types. The β coefficients for the direct effect of Wave IV depression on Wave IV occupational prestige were: $-.001$ ($p>.05$) in the full sample, $-.043$ ($p>.05$) in the male subsample, $.000$ ($p>.05$) in the female subsample, $-.025$ ($p>.05$) in the white subsample, and $.016$ ($p>.05$) in the black subsample. The z-tests for equality of coefficients revealed that the effects of Wave IV depression on occupational prestige attainment among male respondents was not significantly different than the effect among female respondents. These tests also indicated that the effects did not significantly differ between white and black respondents.

It appears that Wave IV depression did not have any significant mediating effect in the relationship between Wave IV PI dummy and Wave IV occupational prestige. The Sobel tests revealed that the coefficients for the effects of Wave IV PI dummy on Wave IV occupational prestige did not change significantly when Wave IV depression was added to the models. The change in β was $-.001$ ($p>.05$) in the full sample, $-.002$ ($p>.05$) in the male subsample, $+.000$ ($p>.05$) in the female subsample, $-.002$ ($p<.05$) in the white subsample, and $-.001$ ($p>.05$) in the black subsample.

Wave IV Anger

Wave IV anger had a significant negative direct effect on Wave IV occupational prestige in all five sample types ($\beta=-.078$, $p<.001$ in the full sample; $\beta=-.057$, $p<.01$ in the male subsample; $\beta=-.097$, $p<.001$ in the female subsample; $\beta=-.069$, $p<.001$ in the white subsample; and $\beta=-.113$, $p<.001$ in the black subsample). However, the z-tests for

equality of coefficients revealed that these effects did not differ significantly by gender or race.

The Sobel tests for mediation revealed that Wave IV anger did not play a significant mediating role in the relationship between Wave IV PI dummy and Wave IV occupational prestige in any of the five sample types. Wave IV PI dummy's B coefficient in the models predicting Wave IV occupational prestige did not change significantly when Wave IV anger was added ($\Delta\beta = -.002$, $p > .05$ in the full sample; $\Delta\beta = +.000$, $p > .05$ in the male subsample; $\Delta\beta = -.003$, $p > .05$ in the female subsample; $\Delta\beta = -.001$, $p > .05$ in the white subsample; and $\Delta\beta = -.003$, $p > .05$ in the black subsample).

Wave IV Stress

The β coefficients for the direct effect of Wave IV stress on Wave IV occupational prestige were: $-.101$ ($p < .001$) in the full sample, $-.104$ ($p < .001$) in the male subsample, $-.098$ ($p < .001$) in the female subsample, $-.100$ ($p < .001$) in the white subsample, and $-.113$ ($p < .001$) in the black subsample. The z-tests for equality of coefficients revealed that these coefficients were not significantly different when comparing the male subsample to female subsample or the white subsample to the black subsample. Thus, it appears that Wave IV stress had a significant negative direct effect on Wave IV occupational prestige that was rather consistent across all five sample types.

Wave IV stress did not have a significant mediating effect in the relationship between Wave IV PI dummy and Wave IV occupational prestige, either. The change in the B coefficient for Wave IV PI dummy when Wave IV stress was added to the models predicting Wave IV occupational prestige was $-.001$ in the full sample, $+.000$ in the male subsample, $-.002$ in the female subsample, $-.001$ in the white subsample, and $-.005$ in the

black subsample. The Sobel tests revealed that none of these changes were significant at the $p < .05$ level.

Direct Effects of Wave IV PI Duration on Wave IV Occupational Prestige

The results from the models regressing Wave IV occupational prestige on Wave IV PI duration, parent social class variables, and other control variables are presented in Table 5.47. The results in this table indicate that Wave IV PI duration had a significant effect on Wave IV occupational prestige in the full sample ($\beta = -.123$, $p < .05$)²⁷ and the male subsample ($\beta = -.204$, $p < .05$). Increases in parental incarceration lengths were associated with decreases in respondents' occupational prestige among all respondents who had experienced a parent being incarcerated only one prior to Wave IV and among males who had experienced a parent being incarcerated only once prior to Wave IV. Wave IV PI duration did not exert a significant effect on Wave IV occupational prestige in the female subsample ($\beta = -.045$, $p > .05$), white subsample ($\beta = -.048$, $p > .05$) or black subsample ($\beta = -.226$, $p > .05$). The z-tests for equality of coefficients revealed that the effects of Wave IV PI duration on Wave IV occupational prestige did not differ significantly by gender or race.

²⁷ The effect of Wave IV PI duration on Wave IV occupational prestige was also significantly moderated by parent occupational prestige when analyzing the full sample. Wave IV PI duration exerted a significant positive effect on Wave IV occupational prestige at low levels of parent occupational prestige, but a significant negative effect at the highest levels of parent occupational prestige.

Table 5.47 Wave IV Occupational Prestige Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	-.123*	-.204*	-.045	-.048	-.226
Male	.045			.059	.053
White	.024	.069	-.207		
Black	.058	.060	-.098		
Asian	.021	.000	-.015		
Other race	-.004	-.130	-.083		
Hispanic	.065	.246	.055	-.008	.185
Age	.037	.002	.011	.039	.063
Wave I household income	.081	.123	.036	.060	.182
Parent occ. prestige	.114	.130	.100	.225*	.000
Parent education	.148*	.149	.159	.087	.149
Wave I social support	.085	-.003	.167	.166* ^{RZ}	-.195 ^{RZ}
Wave IV social isolation	.036	.009	.056	.035	.035
Wave IV depression	-.015	.096	-.057	-.016	.226
Wave IV anger	-.168**	-.127	-.174	-.144	-.243
Wave IV stress	-.092	-.124	-.080	-.094	-.271
Adult arrests	-.115	-.163	-.113	-.035	-.187
Black neighborhood	.072	.203	-.035	.074	.033
Proportion Hispanic	.226**	.185	.141	.189	.077
Urban neighborhood	.029	.047	.044	.092	-.016
Modal education	-.089	-.223	-.023	-.071	-.299
Neighborhood poverty	-.157*	-.372** ^{GZ}	-.016 ^{GZ}	-.115	-.282
Constant					
N	263	119	144	159	75
R ²	.226	.314	.229	.234	.322
Adjusted R ²	.155	.174	.096	.136	.105

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Tests for Mediation in the Relationship between Wave IV PI Duration and Wave IV Occupational Prestige

The results from the analyses of the direct effects of Wave IV PI duration, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV occupational prestige are presented in Table 5.48. The results from the tests to

determine if Wave IV social isolation, and Wave IV depression, Wave IV anger, and/or Wave IV stress significantly mediated the relationship between Wave IV PI duration and Wave IV occupational prestige are also presented in Table 5.48.

Table 5.48 Direct and Indirect Effects of Wave IV PI Duration on Wave IV Occupational Prestige Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	.001	.000	.002	-.001	.001
Path a coefficient	.025	.012	.044	-.016	.017
Path b coefficient	.032	.008	.049	.032	.032
Indirect effect	.001	.000	.002	-.001	.001
Direct effect (path c')	-.115*	-.195*	-.041	-.044	-.228
Total effect (path c)	-.115*	-.195*	-.039	-.044	-.227
Proportion mediated	-.007	-.001	-.054	.012	-.002
<i>Wave IV Depression</i>					
Sobel test	.000	-.002	.000	.000	-.007
Path a coefficient	.013	-.027	.004	-.033	-.033
Path b coefficient	-.012	.075	-.045	-.012	.217
Indirect effect	.000	-.002	.000	.000	-.007
Direct effect (path c')	-.115*	-.195*	-.041	-.044	-.228
Total effect (path c)	-.116*	-.197*	-.041	-.044	-.235
Proportion mediated	.001	.010	.004	-.009	.030
<i>Wave IV Anger</i>					
Sobel test	-.006	-.009	.002	-.003	-.024
Path a coefficient	.037	.078	-.015	.022	.104
Path b coefficient	-.149**	-.118	-.150	-.129	-.235
Indirect effect	-.006	-.009	.002	-.003	-.024
Direct effect (path c')	-.115*	-.195*	-.041	-.044	-.228
Total effect (path c)	-.121*	-.204*	-.039	-.047	-.252*
Proportion mediated	.046	.045	-.059	.060	.097
<i>Wave IV Stress</i>					
Sobel test	.007	.005	.009	.005	.036
Path a coefficient	-.091	-.051	-.125	-.065	-.148
Path b coefficient	-.080	-.103	-.071	-.082	-.243
Indirect effect	.007	.005	.009	.005	.036
Direct effect (path c')	-.115*	-.195*	-.041	-.044	-.228
Total effect (path c)	-.108*	-.190*	-.032	-.039	-.192
Proportion mediated	-.068	-.028	-.276	-.137	-.187

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

As described above, when analyzing data from only those respondents who had a parent incarcerated only once before Wave IV, Wave IV PI duration had a significant

negative direct effect on Wave IV occupational prestige in the full sample and male subsample, but not in any of the other sample types. Wave IV PI duration did not have any significant direct effects on Wave IV social isolation, Wave IV depression, Wave IV anger, or Wave IV stress.

The only significant direct effect of a mediating variable on Wave IV occupational prestige was the Wave IV anger on Wave IV occupational prestige in the full sample. None of the other mediating variables had a significant direct effect on Wave IV occupational prestige. The z-tests for equality of coefficients across the subsamples revealed that there were no significant differences by gender or race in the direct effects of the mediating variables on Wave IV occupational prestige.

Wave IV Social Isolation

The β coefficients for the direct effects of Wave IV social isolation on Wave IV occupational prestige were: .032 ($p > .05$) in the full sample, .008 ($p > .05$) in the male subsample, .049 ($p > .05$) in the female subsample, .032 ($p > .05$) in the white subsample, and .032 ($p > .05$) in the black subsample. It appears that Wave IV social isolation did not have any significant mediating effect in the relationship between Wave IV PI duration and Wave IV occupational prestige. The Sobel tests revealed that the coefficients for the effects of Wave IV PI duration did not change significantly when Wave IV social isolation was added to the models predicting Wave IV occupational prestige. The change in β was +.001 ($p > .05$) in the full subsample, +.000 ($p > .05$) in the male subsample, +.002 ($p > .05$) in the female subsample, -.001 ($p > .05$) in the white subsample, and +.001, ($p > .05$) in the black subsample.

Wave IV Depression

The β coefficients for the direct effects of Wave IV depression on Wave IV occupational prestige were: $-.012$ ($p > .05$) in the full sample, $.075$ ($p > .05$) in the male subsample, $-.045$ ($p > .05$) in the female subsample, $-.012$ ($p > .05$) in the white subsample, and $.217$ ($p > .05$) in the black subsample. The Sobel tests for mediation revealed that the effects of Wave IV PI duration did not change significantly when Wave IV depression was added to the models predicting Wave IV occupational prestige. The change in β was $+.000$ ($p > .05$) in the full sample, $-.002$ ($p > .05$) in the male subsample, $+.000$ ($p > .05$) in the female subsample, $+.000$ ($p > .05$) in the white subsample, and $-.007$ ($p > .05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV depression in the relationship between Wave IV PI duration and Wave IV occupational prestige.

Wave IV Anger

The β coefficients for the direct effects of Wave IV anger on Wave IV occupational prestige were: $-.149$ ($p < .05$) in the full sample, $-.118$ ($p > .05$) in the male subsample, $-.150$ ($p > .05$) in the female subsample, $-.129$ ($p > .05$) in the white subsample, and $-.235$ ($p > .05$) in the black subsample. Wave IV anger did not have a significant mediating effect in the relationship between Wave IV PI duration and Wave IV occupational prestige, either. The change in the B coefficient for Wave IV PI duration when Wave IV anger was added to the models predicting Wave IV occupational prestige was $-.006$ in the full sample, $-.009$ in the male subsample, $+.002$ in the female subsample, $-.003$ in the white subsample, and $-.024$ in the black subsample. The Sobel tests revealed that none of these changes were significant at the $p < .05$ level.

Wave IV Stress

The β coefficients for the direct effect of Wave IV stress on Wave IV occupational prestige were: $-.080$ ($p > .05$) in the full sample, $-.103$ ($p > .05$) in the male subsample, $-.071$ ($p > .05$) in the female subsample, $-.082$ ($p > .05$) in the white subsample, and $-.243$ ($p > .05$) in the black subsample. The Sobel tests for mediation revealed that Wave IV stress did not play a significant mediating role in the relationship between Wave IV PI duration and Wave IV occupational prestige in any of the five sample types. Wave IV PI duration's B coefficient in the models predicting Wave IV occupational prestige did not change significantly when Wave IV stress was added ($\Delta\beta = +.007$, $p > .05$ in the full sample; $\Delta\beta = +.005$, $p > .05$ in the male subsample; $\Delta\beta = +.009$, $p > .05$ in the female subsample; $\Delta\beta = +.005$, $p > .05$ in the white subsample; and $\Delta\beta = +.036$, $p > .05$ in the black subsample).

Direct Effects of Wave IV PI Dummy on Wave IV Educational Attainment

The results from the models regressing Wave IV educational attainment on Wave IV PI dummy, parent social class variables, other control variables are presented in Table 5.49. The results in this table indicate that Wave IV PI dummy had as significant effect on Wave IV educational attainment in the full sample ($\beta = -.039$, $p < .01$)²⁸, male subsample

²⁸ The interaction between Wave IV PI dummy and Hispanic was a significant predictor of Wave IV educational attainment in the full sample, male subsample, and white subsample. In all three subsample types, Wave IV PI dummy exerted a significant negative effect on Wave IV educational attainment among non-Hispanic respondents, but did not exert a significant effect among Hispanic respondents.

($\beta = -.042$, $p < .05$)²⁹, female subsample ($\beta = -.034$, $p < .05$)³⁰, and white subsample ($\beta = -.057$, $p < .001$). Among respondents in these sample types, those respondents who experienced parental incarceration before Wave IV reported significantly lower levels of educational attainment. Wave IV PI dummy did not have a significant effect on educational attainment in the black subsample ($\beta = .006$, $p > .05$). Further, the z-tests for equality of coefficients revealed that the effects of Wave IV PI dummy on Wave IV educational attainment were significantly different for white and black respondents. The effects were stronger among white respondents. These tests revealed that the effects of Wave IV PI dummy on educational attainment did not differ significantly between male respondents and female respondents.

²⁹ Proportion Hispanic also moderated the effects of Wave IV PI dummy on Wave IV educational attainment in the male subsample. Wave IV PI dummy had significant negative effect on educational attainment among respondents who lived in neighborhood with the lowest proportion of Hispanics at Wave I, but did not exert a significant effect among respondents who live in neighborhoods with the highest proportions of Hispanics at Wave I.

³⁰ Urban neighborhood and neighborhood poverty level moderated the effects of Wave IV PI dummy on Wave IV educational attainment among females. Marginal analyses revealed that Wave IV PI dummy exerted a significant negative effect on Wave IV educational attainment among females who lived in nonurban neighborhoods and/or neighborhoods with the lowest poverty rates at Wave I, but did not exert a significant effect among female respondents who lived in urban neighborhoods and/or neighborhoods with the highest poverty rates at Wave I.

Table 5.49 Wave IV Educational Attainment Regressed on Wave IV PI Dummy, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI dummy	-.039**	-.042*	-.034*	-.057***RZ	.006 ^{RZ}
Male	-.137***			-.125***RZ	-.190***RZ
White	.081	.022	.132		
Black	.069	-.017	.146*		
Asian	.064**	.060	.066*		
Other race	.060*	.036	.085*		
Hispanic	-.010	-.008	-.014	.003	-.001
Age	.012	.028	-.001	.011	-.009
Wave I household income	.078***	.075***	.082***	.064***	.104***
Parent occ. prestige	.072***	.083***	.065**	.100***RZ	.037 ^{RZ}
Parent education	.306***	.287***	.329***	.307***	.315***
Wave I social support	.049***	.048*	.051**	.068***RZ	-.010 ^{RZ}
Wave IV social isolation	.083***	.101***	.068***	.079***	.088**
Wave IV depression	-.061***	-.052*	-.066**	-.061**	-.048
Wave IV anger	-.073***	-.057**	-.089***	-.067***	-.067*
Wave IV stress	-.102***	-.122***	-.084***	-.099***	-.110***
Adult arrests	-.134***	-.164***	-.095***	-.127***	-.141***
Black neighborhood	.035*	.022	.046	.018	.041
Proportion Hispanic	.049**	.021	.076***	.040*	.005
Urban neighborhood	.002	.022	-.018	.006	-.011
Modal education	.048**	.062**	.036	.057**	.014
Neighborhood poverty	-.062***	-.048*	-.078***	-.052**	-.075*
Constant					
N	4782	2177	2605	3186	1096
R ²	.293	.286	.284	.312	.278
Adjusted R ²	.290	.279	.278	.308	.266

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave IV PI Dummy and Wave IV Educational Attainment

The results from the analyses of the direct effects of Wave IV PI dummy, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV educational attainment are presented in Table 5.50. The results from the tests to

determine if Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress significantly mediate the relationship between Wave IV PI dummy and Wave IV educational attainment are also presented in Table 5.50.

Table 5.50 Direct and Indirect Effects of Wave IV PI Dummy on Wave IV Educational Attainment Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	.001	-.001	.002	.001	.004
Path a coefficient	.013	-.015 ^{GZ}	.034 ^{GZ}	.007	.046
Path b coefficient	.083***	.100***	.067***	.078***	.085**
Indirect effect	.001	-.001	.002	.001	.004
Direct effect (path c')	-.039**	-.042*	-.034*	-.057*** ^{RZ}	.006 ^{RZ}
Total effect (path c)	-.038**	-.043*	-.032	-.056*** ^{RZ}	.010 ^{RZ}
Proportion mediated	-.029	.034	-.073	-.009	.388
<i>Wave IV Depression</i>					
Sobel test	-.002*	-.003	-.001	-.004*** ^{RZ}	.002 ^{RZ}
Path a coefficient	.034**	.053**	.015	.066*** ^{RZ}	-.049* ^{RZ}
Path b coefficient	-.060***	-.051*	-.066**	-.060**	-.047
Indirect effect	-.002*	-.003	-.001	-.004*** ^{RZ}	.002 ^{RZ}
Direct effect (path c')	-.039**	-.042*	-.034*	-.057*** ^{RZ}	.006 ^{RZ}
Total effect (path c)	-.041**	-.045*	-.035*	-.061*** ^{RZ}	.008 ^{RZ}
Proportion mediated	.050	.061	.029	.066	.268
<i>Wave IV Anger</i>					
Sobel test	-.001	.000	-.003	-.001	-.002
Path a coefficient	.020	.005	.030	.009	.027
Path b coefficient	-.071***	-.056**	-.087***	-.066***	-.063*
Indirect effect	-.001	.000	-.003	-.001	-.002
Direct effect (path c')	-.039**	-.042*	-.034*	-.057*** ^{RZ}	.006 ^{RZ}
Total effect (path c)	-.040**	-.042*	-.037*	-.057*** ^{RZ}	.004 ^{RZ}
Proportion mediated	.035	.007	.072	.010	-.381
<i>Wave IV Stress</i>					
Sobel test	-.001	-.001	-.001	.001 ^{RZ}	-.004 ^{RZ}
Path a coefficient	.010	.004	.015	-.014 ^{RZ}	.042 ^{RZ}
Path b coefficient	-.100***	-.120***	-.083***	-.098***	-.106***
Indirect effect	-.001	-.001	-.001	.001 ^{RZ}	-.004 ^{RZ}
Direct effect (path c')	-.039**	-.042*	-.034*	-.057*** ^{RZ}	.006 ^{RZ}
Total effect (path c)	-.040**	-.042*	-.035*	-.055*** ^{RZ}	.002 ^{RZ}
Proportion mediated	.024	.012	.036	-.025	-2.566

*p<.05, **p<.01, ***p<.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Parent SES variables and all other control variables included in models, but not presented

As indicated in previous results tables, Wave IV PI dummy had a significant negative direct effect on Wave IV educational attainment in the full sample, male

subsample, female subsample, and white subsample. It did not have a significant direct effect among black respondents. Wave PI dummy did not have any significant direct effects on Wave IV social isolation, Wave IV anger, or Wave IV depression. It did, however, significantly predict Wave IV depression in all samples but the female subsample. This effect was positive in the full sample, male subsample, and white subsample, but negative in the black subsample.

With the exception of the effect of the effect of Wave IV depression in the black subsample, all of the mediating variables had a significant direct effect on Wave IV educational attainment. However, the z-tests for equality of coefficients revealed that none of those effects varied significantly by gender or race.

Wave IV Social Isolation

Wave IV social isolation had a significant positive direct effect on Wave IV educational attainment in all five sample types ($\beta=.083$, $p<.001$ in the full sample; $\beta=.100$, $p<.001$ in the male subsample; $\beta=.067$, $p<.001$ in the female subsample; $\beta=.078$, $p<.001$ in the white subsample; and $\beta=.085$, $p<.001$ in the black subsample).

The Sobel tests for mediation revealed that Wave IV social isolation did not play a significant mediating role in the relationship between Wave IV PI dummy and Wave IV educational attainment in any of the five sample types. Wave IV PI dummy's B coefficient in the models predicting Wave IV educational attainment did not change significantly when Wave IV social isolation was added ($\Delta\beta=+.001$, $p>.05$ in the full sample; $\Delta\beta=-.001$, $p>.05$ in the male subsample; $\Delta\beta=+.002$, $p>.05$ in the female subsample; $\Delta\beta=+.001$, in the white subsample; and $\Delta\beta=+.004$, $p>.05$ in the black subsample).

Wave IV Depression

Wave IV depression exerted a significant negative direct effect on Wave IV educational attainment in all samples but the black subsample ($\beta = -.060$, $p < .001$ in the full sample; $\beta = -.100$, $p < .05$ in the male subsample; $\beta = -.066$, $p < .001$ in the female subsample; $\beta = -.060$, $p < .01$ in the white subsample; and $\beta = -.047$, $p > .05$ in the black subsample).

Wave IV depression had a significant mediating effect in the relationship between Wave I PI dummy and Wave IV educational attainment, but only when analyzing the full sample and the white subsample. The absolute value of the B coefficient for this effect of Wave IV PI dummy dropped from .041 to .039 when analyzing the full sample and from .061 to .057 when analyzing the white subsample. The Sobel tests revealed that these changes were significant at the $p < .05$ level. The change in the B coefficient for Wave IV PI dummy when Wave IV depression was added to the models predicting Wave IV educational attainment was -.003 in the male subsample, -.001 in the female subsample, -.001 in the white subsample, and +.002 in the black subsample. However, the Sobel tests revealed that none of these changes were significant at the $p < .05$ level.

Wave IV Anger

Wave IV anger had a significant negative direct effect on Wave IV educational attainment in all five sample types. The β coefficients for the direct effect of Wave IV anger on Wave IV educational attainment were: -.071 ($p < .001$) in the full sample, -.567 ($p < .01$) in the male subsample, -.087 ($p < .001$) in the female subsample, -.066 ($p < .001$) in the white subsample, and -.063 ($p < .05$) in the black subsample.

The Sobel tests for mediation revealed that the effects of Wave IV PI dummy did not change significantly when Wave IV anger was added to the models predicting Wave

IV educational attainment. The change in β was $-.001$ ($p>.05$) in the full sample, $+.000$ ($p>.05$) in the male subsample, $-.003$ ($p>.05$) in the female subsample, $-.001$ ($p>.05$) in the white subsample, and $-.002$ ($p>.05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV anger in the relationship between Wave IV PI dummy and Wave IV educational attainment.

Wave IV Stress

Wave IV stress also had a significant negative direct effect on Wave IV educational attainment in all five sample types. The β coefficients for the direct effect of Wave IV stress on Wave IV educational attainment were: $-.100$ ($p<.001$) in the full sample, $-.120$ ($p<.001$) in the male subsample, $-.083$ ($p<.001$) in the female subsample, $-.098$ ($p<.001$) in the white subsample, and $-.106$ ($p<.001$) in the black subsample.

Wave IV stress did not have any significant mediating effect in the relationship between Wave IV PI dummy and Wave IV educational attainment, either. The Sobel tests revealed that the coefficients for the effects of Wave IV PI dummy on Wave IV educational attainment did not change significantly when Wave IV stress was added to the models. The change in β was $-.001$ ($p>.05$) in the full sample, $-.001$ ($p>.05$) in the male subsample, $-.001$ ($p>.05$) in the female subsample, $+.000$ ($p>.05$) in the white subsample, and $-.001$ ($p>.05$) in the black subsample.

Direct Effects of Wave IV PI Duration on Wave IV Educational Attainment

The results from the models regressing Wave IV educational attainment on Wave IV PI duration, parent social class variables, other control variables are presented in Table 5.51. It appears that Wave IV PI duration had a significant negative effect on

Wave IV educational attainment in the female subsample only ($\beta=-.183, p<.05$)³¹. Controlling for other variables in the model, among females who had a parent incarcerated only prior to Wave IV, increases in the length of that incarceration were associated with decreases educational attainment. Wave IV PI duration did not have significant effect on Wave IV educational attainment when analyzing the full sample ($\beta=-.091, p>.05$)³², male subsample ($\beta=.006, p>.05$), white subsample ($\beta=-.036, p>.05$)³³, or black subsample ($\beta=-.181, p>.05$). The z-tests for equality of coefficients revealed that the effects of Wave IV PI duration on educational attainment among male respondents was not significantly different than the effect among female respondents. The effects did not significantly differ between white and black respondents, either.

³¹ The interaction between Wave IV PI duration and Wave IV social support exerted a significant effect on Wave IV educational attainment when analyzing the female subsample. Wave IV PI duration did not have a significant effect on Wave IV educational attainment at the lowest levels of Wave I social support, but had a significant positive effect at the highest levels of Wave I social support.

³² Parent education significantly moderated the relationship between Wave IV PI duration and Wave IV educational attainment in the full sample such that Wave IV PI duration had a significant negative effect at the lowest levels of parent education, but did not have a significant effect at the highest levels of parent education.

³³ Wave IV social isolation significantly moderated the effects of Wave IV PI duration on Wave IV educational attainment when analyzing the white subsample. Wave IV PI duration exerted a significant negative effect on Wave IV education at the lowest levels of Wave IV social isolation, but did not exert a significant effect at the highest levels of Wave IV social support.

Table 5.51 Wave IV Educational Attainment Regressed on Wave IV PI Duration, Parent Social Class Variables, and Control Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
Wave IV PI duration	-.091	.006	-.183*	-.036	-.180
Male	-.054			.003 ^{RZ}	-.417 ^{**RZ}
White	-.059	-.011	-.048		
Black	.070	-.002	.186		
Asian	.055	.000	.091		
Other race	-.218*	-.139	-.220		
Hispanic	.185*	.291	.107	.123	.004
Age	.051	-.039	.023	.037	.139
Wave I household income	.090	.124	.086	.130	-.055
Parent occ. prestige	.047	.159	-.030	.138	.020
Parent education	.240 ^{**}	.233 [*]	.227 [*]	.162	.264
Wave I social support	-.060	-.051	-.101	-.056	-.107
Wave IV social isolation	.092	.090	.111	.133	.051
Wave IV depression	.002	.174 ^{GZ}	-.116 ^{GZ}	.023	-.065
Wave IV anger	-.039	-.042	-.024	-.049	-.129
Wave IV stress	-.042	-.056	-.083	-.041	-.191
Adult arrests	-.265 ^{***}	-.321 ^{**}	-.135	-.290 ^{**RZ}	.134 ^{RZ}
Black neighborhood	-.027	.080	-.105	.066	.186
Proportion Hispanic	.067	.134	-.050	.067	-.087
Urban neighborhood	.032	-.069	.160	.104 ^{RZ}	-.168 ^{RZ}
Modal education	-.013	-.021	-.069	-.012	.049
Neighborhood poverty	-.074	-.123	-.013	-.011 ^{RZ}	-.379 ^{**RZ}
Constant					
N	263	119	144	159	75
R ²	.234	.294	.311	.206	.407
Adjusted R ²	.164	.150	.192	.104	.216

*p<.05, **p≤.01, ***p≤.001

GZ: Z-test indicates significant difference in coefficients between male and female respondents at p<.05 level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at p<.05 level

Tests for Mediation in the Relationship between Wave IV PI Duration and Wave IV Educational Attainment

The results from the analyses of the direct effects of Wave IV PI duration, Wave IV social isolation, and Wave IV depression, Wave IV anger, and Wave IV stress on Wave IV educational attainment are presented in Table 5.52. The results from the tests to

determine if Wave IV social isolation, and Wave IV depression, Wave IV anger, and/or Wave IV stress significantly mediate the relationship between Wave IV PI duration and Wave IV educational attainment are also presented in Table 5.52.

Table 5.52 Direct and Indirect Effects of Wave IV PI Duration on Wave IV Educational Attainment Using Wave IV Mediating Variables

	Full Sample β	Male Subsample β	Female Subsample β	White Subsample β	Black Subsample β
<i>Wave IV Social Isolation</i>					
Sobel test	.002	.001	.005	-.002	.001
Path a coefficient	.025	.012	.044	-.016	.017
Path b coefficient	.092	.096	.106	.137	.043
Indirect effect	.002	.001	.005	-.002	.001
Direct effect (path c')	-.096	.007	-.188*	-.037	-.166
Total effect (path c)	-.094	.008	-.183*	-.039	-.165
Proportion mediated	-.024	.139	-.025	.056	-.005
<i>Wave IV Depression</i>					
Sobel test	.000	-.004	.000	-.001	.002
Path a coefficient	.013	-.027	.004	-.033	-.033
Path b coefficient	.002	.160	-.102	.020	-.057
Indirect effect	.000	-.004	.000	-.001	.002
Direct effect (path c')	-.096	.007	-.188*	-.037	-.166
Total effect (path c)	-.096	.003	-.188*	-.038	-.164
Proportion mediated	.000	-1.598	.002	.017	-.011
<i>Wave IV Anger</i>					
Sobel test	-.001	-.004	.000	-.001	-.012
Path a coefficient	.037	.078	-.015	.022	.104
Path b coefficient	-.040	-.045	-.022	-.050	-.114
Indirect effect	-.001	-.004	.000	-.001	-.012
Direct effect (path c')	-.096	.007	-.188*	-.037	-.166
Total effect (path c)	-.098	.004	-.187*	-.038	-.177
Proportion mediated	.015	-.998	-.002	.029	.067
<i>Wave IV Stress</i>					
Sobel test	.004	.003	.010	.003	.023
Path a coefficient	-.091	-.051	-.125	-.065	-.148
Path b coefficient	-.041	-.054	-.082	-.041	-.156
Indirect effect	.004	.003	.010	.003	.023
Direct effect (path c')	-.096	.007	-.188*	-.037	-.166
Total effect (path c)	-.093	.010	-.177*	-.035	-.143
Proportion mediated	-.041	.280	-.058	-.077	-.162

* $p < .05$, ** $p \leq .01$, *** $p \leq .001$

GZ: Z-test indicates significant difference in coefficients between male and female respondents at $p < .05$ level

RZ: Z-test indicates significant difference in coefficients between white and black respondents at $p < .05$ level

Parent SES variables and all other control variables included in models, but not presented

When analyzing data from only those respondents who had a parent incarcerated only once before Wave IV, Wave IV PI duration had a significant negative direct effect

on Wave IV educational attainment in the female subsample, but not in any of the other sample types. Wave IV PI duration did not have any significant direct effects on Wave IV social isolation, Wave IV depression, Wave IV anger, or Wave IV stress.

No Wave IV mediating variables significantly predicted Wave IV educational attainment among respondents who had a parent that was incarcerated only once prior to Wave IV. There were also no significant differences in the effect of Wave IV mediating variables on Wave IV educational attainment.

Wave IV Social Isolation

The β coefficients for the direct effects of Wave IV social isolation on Wave IV educational attainment were: .092 ($p > .05$) in the full sample, .001 ($p > .05$) in the male subsample, .106 ($p > .05$) in the female subsample, .137 ($p > .05$) in the white subsample, and .043 ($p > .05$) in the black subsample.

The Sobel tests for mediation revealed that the effects of Wave IV PI duration did not change significantly when Wave IV social isolation was added to the models predicting Wave IV educational attainment. The change in β was +.002 ($p > .05$) in the full sample, +.001 ($p > .05$) in the male subsample, +.005 ($p > .05$) in the female subsample, -.002 ($p > .05$) in the white subsample, and +.001 ($p > .05$) in the black subsample. Thus, there was no apparent significant mediating effect of Wave IV social isolation in the relationship between Wave IV PI duration and Wave IV educational attainment.

Wave IV Depression

The β coefficients for the direct effects of Wave IV depression on Wave IV educational attainment were: .002 ($p > .05$) in the full sample, .160 ($p > .05$) in the male

subsample, -.102 ($p > .05$) in the female subsample, .020 ($p > .05$) in the white subsample, and -.057 ($p > .05$) in the black subsample.

Wave IV depression did not have a significant mediating effect in the relationship between Wave IV PI duration and Wave IV educational attainment, either. The change in the B coefficient for Wave IV PI duration when Wave IV depression was added to the models predicting Wave IV educational attainment was +.000 in the full sample, -.004 in the male subsample, +.000 in the female subsample, -.001 in the white subsample, and +.002 in the black subsample. The Sobel tests revealed that none of these changes were significant at the $p < .05$ level.

Wave IV Anger

The β coefficients for the direct effects of Wave IV anger on Wave IV educational attainment were: -.040 ($p > .05$) in the full sample, -.045 ($p > .05$) in the male subsample, -.022 ($p > .05$) in the female subsample, -.050 ($p > .05$) in the white subsample, and -.144 ($p > .05$) in the black subsample.

The Sobel tests for mediation revealed that Wave IV anger did not play a significant mediating role in the relationship between Wave IV PI duration and Wave IV educational attainment in any of the five sample types. Wave IV PI duration's B coefficient in the models predicting Wave IV educational attainment did not change significantly when Wave IV anger was added ($\Delta\beta = -.001$, $p > .05$ in the full sample; $\Delta\beta = -.004$, $p > .05$ in the male subsample; $\Delta\beta = +.000$, $p > .05$ in the female subsample; $\Delta\beta = -.001$, $p > .05$ in the white subsample; and $\Delta\beta = +.012$, $p > .05$ in the black subsample).

Wave IV Stress

The β coefficients for the direct effect of Wave IV stress on Wave IV educational attainment were: $-.041$ ($p>.05$) in the full sample, $-.054$ ($p>.05$) in the male subsample, $-.082$ ($p>.05$) in the female subsample, $-.041$ ($p>.05$) in the white subsample, and $-.156$ ($p>.05$) in the black subsample.

Finally, it appears that Wave IV stress did not have any significant mediating effect in the relationship between Wave IV PI duration and Wave IV educational attainment. The Sobel tests revealed that the coefficients for the effects of Wave IV PI duration did not change significantly when Wave IV stress was added to the models predicting Wave IV educational attainment. The change in β was $+.004$ ($p>.05$) in the full subsample, $+.003$ ($p>.05$) in the male subsample, $+.010$ ($p>.05$) in the female subsample, $+.003$ ($p>.05$) in the white subsample, and $+.023$, ($p>.05$) in the black subsample.

CHAPTER VI

DISCUSSION AND CONCLUSION

In this study I examined the direct effects of parental incarceration on social mobility and the factors that may mediate and/or moderate the effects of parental incarceration on social mobility. In this chapter, I discuss and interpret my findings. I begin by summarizing the results presented in Chapter V and indicating their level of support for the hypotheses presented in Chapter III. I also interpret my results using existing theoretical and empirical literature. Then, I discuss the implications of my findings on sociological theory. Next, I discuss the limitations of this study. I conclude by providing directions for future research.

Summary of Findings

I tested several hypotheses in this study. In this section, I describe and explain the level of support I found for each hypothesis. I begin by summarizing and explaining the relationships between parental incarceration and household income, occupational prestige, and educational attainment. I also discuss how the relationships between parental incarceration and respondent SES variables differed significantly by gender and race.

Then, for each of the Wave I, criminal justice contact, and Wave IV mediating variables, I describe and explain: 1) the direct effects of parental incarceration on it, 2) its

direct effects on the primary dependent variables, 3) whether or not it significantly mediated the relationships between parental incarceration and the primary dependent variables, and 4) if and/or how it moderated the effects of parental incarceration on the primary dependent variables. I also include the direct and moderating effects of parent occupational prestige and parent education in my discussion of Wave I variables.

Finally, I discuss the moderating effects of parent SES, demographic characteristics, and various measures of neighborhood context in the relationships between parental incarceration and the primary dependent variables.

Direct Effects of Parental Incarceration on Primary Dependent Variables

I found a significant negative relationship between all of the parental incarceration dummy variables and all of the primary dependent variables (i.e., Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment). Furthermore, Wave I PI dummy and childhood PI dummy exerted significant negative direct effects on all of the primary dependent variables in multivariate analyses using the full sample. Parental incarceration dummy variables also exerted some significant negative effects on the primary dependent variables in multivariate analyses of the four subsamples.

Although the measure of parental incarceration prevalence at any point in the respondents' life course (Wave IV PI dummy) had a significant negative bivariate relationship with all three primary dependent variables, it only exerted significant effects on Wave IV educational attainment in multivariate analyses. These effects were all negative. In general, parental incarceration duration, whether it was measured before

Wave I, during childhood, or before Wave IV, did not have a significant direct effect on the primary dependent variables in multivariate analyses. There were four exceptions. Wave I PI duration had a significant negative direct effect on Wave IV occupational prestige in the male subsample, childhood PI duration had a significant negative direct effect on Wave IV occupational prestige in the black subsample, Wave IV PI duration had a significant negative direct effect on Wave IV occupational prestige in the full sample and male subsample, and Wave IV PI duration had a significant negative direct effect on Wave IV educational attainment in the female subsample.

These findings provide partial support for Hypothesis 1a, Hypothesis 1b, and Hypothesis 1c. It appears that the incarceration of a parent, especially when at least part of that incarceration occurred before Wave IV and/or age 18, negatively affected Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment. However, the length of parental incarceration, among those who had experienced it, does not appear to have a significant effect on the primary dependent variables. Together, these findings indicate that the transfer of stigma from parent to child through parental incarceration occurs in the actual process of that incarceration, regardless of how long it lasts after it first occurs.

My analyses revealed few significant differences by gender and race in the effects of parental incarceration on the primary dependent variables. The z-tests for equality of coefficients revealed one significant difference in the effects of parental incarceration on the primary dependent variables by gender and three significant differences by race. The effect of Wave I PI duration on Wave IV occupational prestige was significant and negative for males, but not significant for females. The effect of childhood PI duration

on Wave IV occupational prestige was significant and negative for blacks, but not significant for whites. The effects of Wave I PI dummy and Wave IV PI dummy on Wave IV educational attainment was significant and negative for whites, but not significant for blacks.

The finding that parental incarceration duration had a significant effect on Wave IV occupational prestige for males, but not for females provides limited support for Hypothesis 7a. This finding adds some support to the scant existing evidence the noxious effects of parental incarceration are stronger for males. The findings regarding the differential effects of the parental incarceration prevalence by race provide mixed support for Hypothesis 7b and the double-jeopardy hypothesis discussed in Chapter III. The stronger effects of parental incarceration on occupational prestige for blacks supports the double-jeopardy hypothesis, but the stronger effects of parental incarceration for white supports the resiliency hypothesis.

Wave I and Criminal Justice Contact Mediating and Moderating Variables

Social Support

Pearson correlation tests and independent samples t-tests revealed that both Wave I PI dummy and Wave IV PI dummy had a significant negative bivariate relationship with Wave I social support. Wave I social support also had a significant negative bivariate relationship with Wave IV PI dummy. In multivariate analyses, Wave I PI dummy exerted a significant negative effect on Wave I social support in all sample types. However, Wave I PI duration did not exert a significant effect on Wave I social support in any of the sample types.

Wave I social support had a significant bivariate correlation with all three primary dependent variables. In multivariate analyses, Wave I social support exerted a significant positive effect on: 1) household income in all sample types, 2) occupational prestige in all but the black subsample, and 3) educational attainment in all but the black subsample.

Social support also moderated many of the effects of parental incarceration on respondents' SES. In the black subsample, the effects of Wave I PI dummy on Wave IV household income were significant and negative when social support was low, but not significant when social support was high. In the female subsample, the effects of Wave I PI duration on Wave IV household income were significant and negative at low levels of social support, but significant and positive at high levels of social support. Finally, in the full sample, the effects of Wave I PI dummy on Wave IV educational attainment were significant and negative at low levels of social support, but not significant at high levels of social support.

These findings provide strong support for Hypothesis 2a, Hypothesis 2b, and Hypothesis 2c and partial support for Hypothesis 2d. The experience of parental incarceration during childhood, regardless of the duration, appears to weaken social support. That weakening, then, appears to have long-term negative effects on social mobility.

In addition to mediating the effect of parental incarceration on respondents' SES, Wave I social support conditioned it as well. The findings that the effects of parental incarceration were significant at low levels of social support, but generally not significant at high levels of social support, are consistent with several other studies showing that high levels of social support soften the noxious effects of parental incarceration.

Conversely, a lack of social support appears to have aggravated the negative impact of incarceration.

Wave I Household Income

Pearson correlation tests and independent samples t-tests revealed a significant negative bivariate relationship between Wave I PI dummy and Wave I household income. Multivariate analyses also revealed that Wave I PI dummy exerted a significant negative effect on Wave I household income in all five sample types. However, Wave I PI duration did not have a significant effect on Wave I household income in any sample type.

Wave I household income, then, exerted a significant negative effect on all three primary dependent variables in all five sample types (and in both bivariate and multivariate analyses). It also significantly mediated the relationship between: 1) Wave I PI dummy and Wave IV household income in all sample types but the white subsample; 2) Wave I PI dummy and Wave IV occupational prestige in all sample types but the black subsample, and 3) Wave I PI dummy and Wave IV educational attainment in all sample types but the black subsample. Wave I household income did not significantly mediate any relationships between Wave I PI duration and any primary dependent variable. Finally, Wave I household income moderated the effects of parental incarceration duration on Wave IV household income in the black subsample. In the black subsample, the effects of Wave I PI duration on Wave IV household income were not significant at low levels of Wave I household income, but were significant and negative at high levels of Wave I household income.

The direct negative effects of parental incarceration on Wave I household income provide strong support for Hypothesis 3a and are consistent with previous research showing that parental incarceration increases the financial hardships of families (see Wakefield and Wildman 2014 for review). The findings that Wave I household income exerted significant positive effects on the Wave IV SES variables support Hypothesis 3b and are consistent with a wealth of mobility research demonstrating the impact of early economic disadvantage (or advantage) on the socioeconomic life chances of children (see Laub and Sampson 2007 for review). The findings that the effects of parental incarceration on Wave IV SES variables were mediated by Wave I household income provide strong support for Hypothesis 3e and the idea that parental incarceration, especially when it occurs during childhood, sets a process of cumulative disadvantage in motion that diminishes children's socioeconomic life chances. The tests for moderation effects of Wave I household income in the relationship between parental incarceration and respondent SES failed to support Hypothesis 3f. However, as discussed below, other measures of parent SES taken at Wave I did moderate some of the effects of parental incarceration on respondent SES at Wave IV.

Parent Occupational Prestige

I only examined the direct and moderating effects of parent occupational prestige in this study. Parent occupational prestige had a significant positive bivariate correlation with all three primary dependent variables. In multivariate analyses, parent occupational prestige exerted significant direct positive effects on: 1) Wave IV household income in the full sample and white subsample, 2) Wave IV occupational prestige in all sample

types but the black subsample, and 3) Wave IV educational attainment in all sample types but the black subsample. These findings provided strong support for Hypothesis 3c.

Parental occupation moderated the effect of Wave I PI duration on Wave IV occupational prestige in the full sample such that the effects were significant and positive at the lowest levels of parent occupational prestige but significant and negative at the highest levels of occupational prestige. Parent occupational prestige moderated the effects of Wave IV PI duration on Wave IV occupational prestige in a similar manner. Combined, these two findings failed to support for Hypothesis 3g. In fact, they provided support in the opposite direction. Instead of supporting my assertions that parental incarceration compounds the negative socioeconomic effects of existing disadvantage and that existing economic advantage buffers the negative effects of parental incarceration, these findings support the idea that the effects of parental incarceration may not be as great among those who are more likely to experience it because it is a more normalized (and, thus, less stigmatized) event in the life course. The significant moderation effects were also limited to the relationship between parental incarceration duration and Wave IV occupational prestige, which limited the support for Hypothesis 3g even more.

Parent Education

I only examined the direct and moderating effects of parent education prestige in this study. Parent education had a significant positive bivariate correlation with all three dependent variables. Multivariate analyses revealed that parent education had a significant positive effect on Wave IV household income, Wave IV occupational

prestige, and Wave IV educational attainment, thus providing strong support for Hypothesis 3e. This finding was generally consistent across five sample types. However, the effect of parent education on Wave IV occupational prestige in the black subsample was not significant.

I also found mixed support for Hypothesis 3h—that parent education would moderate the effects of parental incarceration on respondent SES variables such that effects would be stronger and more significant at lower levels of parent education. Parent education moderated the effects of: 1) Wave I PI dummy on Wave IV occupational prestige in the full sample, 2) Wave I PI dummy on Wave IV occupational prestige in the white subsample, 3) Wave IV PI dummy on occupational prestige in the full sample, and 4) Wave IV PI duration on Wave IV educational attainment in the full sample. These four findings provided support for the idea that parent education acts as a buffer to the possible negative effects of parental incarceration on socioeconomic outcomes and the idea that parental incarceration may exacerbate the socioeconomic effects of a lack of parental education.

A different type of moderating effect emerged in some analyses. In the male subsample, parent education moderated the effects of Wave IV PI dummy on Wave IV occupational prestige such that the effects of Wave IV PI dummy were significant and positive at low levels of parent education, but not significant at high levels of parent education. A similar moderating pattern was found in the white subsample when examining the moderating effects of parent education in the relationship between Wave IV PI dummy and Wave IV occupational prestige. These two findings directly contradict Hypothesis 3h and were somewhat perplexing. The positive effects of parental

incarceration on occupational prestige among respondents with high levels of parent education may have resulted from the higher levels of human capital possessed by the parents of respondents in the high parent education categories groups. Parents of children with incarcerated parents who had high levels of education may have possessed the knowledge and ability to intervene to not only buffer the effects of parental incarceration but to help it serve as a motivating factor for respondents to attain higher levels of occupational prestige.

Criminal Justice Contact

I found strong, consistent support for Hypothesis 4a, Hypothesis 4b, and Hypothesis 4c in my analyses. First, Pearson correlation tests revealed that childhood PI dummy (but not childhood PI duration) had a significant positive correlation with adult arrests. Multivariate analyses also revealed that childhood PI dummy exerted a significant positive effect on adult arrests in all five sample types. These findings were consistent with Hypothesis 4a and a wealth of existing theoretical and empirical literature connecting parental incarceration to offending and criminal justice contact among the children of incarcerated parents. Adult arrests, then, had a significant negative effect on Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment in all five sample types. Both bivariate analyses and multivariate analyses revealed this type of relationship. These findings were consistent with Hypothesis 4b and several theoretical and empirical examinations of the effects of criminal justice contact on socioeconomic outcomes. Further, strongly consistent with Hypothesis 4c, adult arrests

significantly mediated the effects of childhood PI dummy on Wave IV household income, Wave IV occupational prestige, and Wave IV educational attainment.

The findings that criminal justice contact mediated the effects of parental incarceration on socioeconomic outcomes are perhaps the most profound findings in this study. A wide body of literature has shown an empirical link between parental offending/incarceration, and criminal justice contact (see Murray, Farrington, and Sekol 2012 for review). A second body of literature has shown an empirical link between parental incarceration and poor educational and socioeconomic outcomes (see Haskins 2011 for review). A third body of literature has shown that criminal justice contact, through a process of social exclusion, negatively affects socioeconomic life chances (see Geller et al. 2009 for review). As described in Chapter I, this study sought to investigate a possible link between these literatures. These robust and consistent findings have revealed such a link. It appears that intergenerational transmission of offending and the intergenerational transmission of disadvantage through parental incarceration are closely linked. As described later in this, this has serious implications for sociological theory.

Criminal justice contact significantly moderated only two relationships between parental incarceration and respondent SES. In the full sample, Wave IV PI dummy exerted a significant negative effect on Wave IV occupational prestige at low levels of adult arrests but exerted significant positive effects at high levels of adult arrests. In the male subsample, Wave IV PI dummy did not exert a significant effect on Wave IV occupational prestige at lower levels of adult arrests, but exerted a significant positive effect at the highest levels of adult arrests. Both of these findings run directly counter to

Hypothesis 4d, which asserts that parental incarceration would have stronger effects at higher levels of respondent arrests.

These findings were perplexing, but they may have been the result of a phenomenon that is similar to the one uncovered in Western's (2002) study of the effects on incarceration on wage trajectories. Western found that individuals who had been incarcerated prior to their early twenties entered jobs that had higher wages, on average, than their counterparts who had not experienced incarceration. Western suggested that this was because they were forced to surpass higher education (and the low wage, part-time jobs that college students often take) and enter into full-time jobs that had higher wages than the jobs of their college student peers. Even though the wages in early adulthood were initially higher for those with an incarceration history, the wage trajectories of individuals with an incarceration history were much flatter than the wage trajectories of individuals with no incarceration history. After around the age of 24, the wages of individuals with no incarceration history quickly surpassed the wages of individuals with an incarceration history.

A similar phenomenon may have occurred among Add Health respondents with regard to parental incarceration history, adult arrests, and occupational prestige. Parental incarceration increased the likelihood that respondents would have higher levels of criminal justice contact. Criminal justice contact may have then increased the likelihood that respondents would take jobs in young adulthood that initially had higher occupational prestige (but probably a flatter occupational prestige trajectory) than the jobs of the respondents' counterparts who had little criminal justice contact.

Wave IV Mediating and Moderating Variables

Wave IV Social Isolation

While Pearson correlation analyses and independent samples t-tests revealed that Wave IV social isolation varied significantly by Wave IV PI dummy (but not Wave IV PI duration), parental incarceration exerted no significant direct effect on Wave IV social isolation in this study's multivariate analyses. Thus, Hypothesis 5a was not strongly supported in this study.

Wave IV social isolation had a significant negative bivariate correlation with Wave IV household income and Wave IV occupational prestige, but it exerted few significant direct effects on respondents' socioeconomic outcomes in multivariate analyses. It had a significant negative direct effect on Wave IV household income in all sample types but the black subsample, which is consistent with Hypothesis 5 and the theoretical and empirical literature that suggests that the social isolation produces poorer socioeconomic outcomes. However, the findings that Wave IV social isolation had a positive effect on Wave IV occupational prestige in the male sample and a positive effect on Wave IV educational attainment, directly contradicted that hypothesis. Thus, this study produced mixed support for Hypothesis 5b.

Wave IV social isolation exerted even fewer significant mediating and moderating effects in this study. It moderated the effects of Wave IV PI duration and Wave IV educational attainment such that the effects were significant and negative at low levels of social isolation, but not significant at high levels of social isolation. This finding ran counter to Hypothesis 5d, which was based on the supposition that social isolation exacerbates the effects of parental incarceration.

Wave IV social isolation did not significantly mediate any of the relationship between parental incarceration and respondents' socioeconomic outcomes. Thus, Hypothesis 5c was not supported in this study. This is surprising because so much of the literature suggests that parental incarceration leads to social isolation, which then lead to poor social and economic outcomes. The lack of a mediating effect in this study may have been a result of the fact that social isolation was measured at Wave IV. The Wave IV interview may have been several years after parental incarceration. By this time in the life course (i.e., young adulthood) many respondents who experienced parental incarceration early in the life course may have "recovered" from any isolating effects of parental incarceration.

The exclusionary outcomes that may occur directly after parental incarceration during childhood and adolescence may set off a chain of cumulative social disadvantage. This chain may then eventually lead to disparate socioeconomic outcomes. Future studies should examine if social isolation during childhood/adolescence mediates the effects of parental incarceration during childhood/adolescence on socioeconomic outcomes in adulthood.

Wave IV Depression

As revealed through Pearson correlation tests and independent samples t-tests, Wave IV depression varied significantly by all three parental incarceration dummy variables (but no parental incarceration duration variables). Furthermore, multivariate analyses revealed that Wave IV PI dummy (but not Wave IV PI duration) exerted a significant positive direct effect on Wave IV depression in the full sample, male

subsample, and white subsample. It had a significant negative effect on Wave IV depression in the black subsample.

Wave IV depression had a significant negative bivariate relationship with all three primary dependent variables. Multivariate analyses revealed that Wave IV depression exerted a significant negative effect on Wave IV household income in all but the white subsample and a significant negative effect on Wave IV educational attainment in all but the black subsample.

Although the parental incarceration variables had several significant effects on Wave IV depression and Wave IV depression had several significant effects on socioeconomic outcomes, it significantly mediated only a few of the relationships between parental incarceration and Wave IV socioeconomic outcomes. It mediated the effects of Wave IV PI dummy on Wave IV household income in the full sample only and the effects of Wave IV PI dummy on Wave IV educational attainment in the full sample and white subsample only.

Wave IV depression had only one significant moderating effect. It moderated the effect of Wave IV PI dummy on Wave IV household income among female respondents such that the effects of Wave IV PI dummy were not significant at low levels depression, but significant and negative at high levels of depression.

Taken together, these findings provide general support for Hypothesis 6a, partial support for Hypothesis 6d, limited support for Hypothesis 6h, and marginal support for Hypothesis 6k. Again, the lack of Wave IV depression's mediation and moderation effects may be the result of the fact that depression was measured so long after the experience of parental incarceration for many of the respondents who had experienced it.

Future studies should examine the differences between the immediate and long-term effects of parental incarceration on depression. They should also examine whether the immediate effects of parental incarceration on depression then lead to long-term effects on social and economic outcomes.

Wave IV Anger

All three parental incarceration dummy variables (but no parental incarceration duration variable) had a significant positive bivariate correlation with Wave IV anger. The mean for Wave IV anger was also significantly higher among respondents who experienced parental incarceration before Wave IV. In multivariate analyses, though, neither Wave IV PI dummy nor Wave IV PI duration exerted any significant effects on Wave IV anger. Thus, support for Hypothesis 6b eroded when other relevant variables were controlled for in the analysis of the relationship between parental incarceration and anger.

Wave IV anger had a significant negative bivariate relationship with all three primary dependent variables. Also, Wave IV anger exerted some significant effects on the primary dependent variables in multivariate analyses. It exerted a significant positive effect on Wave IV household income in the male subsample, a significant negative effect on Wave IV occupational prestige in all five sample types, and a significant negative effect on Wave IV educational attainment in all five sample types. These results provide strong support for Hypothesis 6e. Wave IV anger neither mediated nor moderated any of the relationships between parental incarceration and socioeconomic outcomes. Thus, Hypotheses 6i and 6l were not supported at all in this study.

Like social isolation and depression, the effects of parental incarceration on anger may be more immediate and short-lived than the effects that were likely measured in this study. Like other negative emotions, the effects of anger on other socioeconomic outcomes may operate through its effects on factors such as academic performance. Future studies should examine the immediate effects of parental incarceration on anger and the effects of anger on factors such as academic performance (especially during childhood).

Wave IV Stress

All three parental incarceration dummy variables (but no parental incarceration duration variable) had a significant positive bivariate correlation with Wave IV stress. The mean for Wave IV stress was also significantly higher among respondents who experienced parental incarceration before Wave IV. However, neither Wave IV PI dummy nor Wave IV PI duration exerted significant effects on Wave IV stress. Thus, Hypothesis 6c was not supported in this study.

Wave IV stress had a significant negative bivariate relationship with all three primary dependent variables and exerted a significant negative effect on all three dependent variables in multivariate analyses. The only effect of Wave IV stress that was not significant was the effect of Wave IV stress on Wave IV household income in the black subsample. Combined, these results provide strong support for Hypothesis 6g.

Wave IV stress significantly moderated the effect of Wave IV PI duration on Wave IV household income among females such that the effects of parental incarceration duration were not significant at lower levels of stress, but significant and negative at the

highest levels of stress. This lends support to Hypothesis 6m, which is based on the idea that stress compounds the other negative effects of parental incarceration and that low stress acts as a buffer to the effects of parental incarceration. However, the finding that Wave IV significantly moderated the effects of Wave IV PI dummy on Wave IV occupational prestige such that the effects of parental incarceration were significant and negative at lower levels of stress, but not significant at higher levels of stress, directly refutes Hypothesis 6m. Finally, Wave IV stress did not mediate any of the effect parental incarceration on the primary dependent variables.

Again the measure of the stress used in this study may not have captured the immediate effects of parental incarceration on stress or the effects of stress caused by parental incarceration on socioeconomic outcomes. Future studies should investigate these relationships.

Moderating Effects of Demographic Control Variables

Other than the differences in the effects of parental incarceration by gender and race that were reviewed in the previous section, there was only one difference in the effect of parental incarceration by a demographic control variable. In the white subsample, Wave I PI dummy exerted a significant negative effect on Wave IV educational attainment among non-Hispanics, but did not exert a significant effect on Wave IV educational attainment among Hispanics.

This finding does not support Hypothesis 7c. In fact, it directly refutes Hypothesis 7c and supports the hypothesis offered in other studies that the effects of parental incarceration are less significant for groups that are relatively less advantaged.

This, combined with the lack of moderating effects for the other demographic controls, indicates that Hypotheses 7a, 7b, 7c, and 7d were not supported in this study.

Moderating Effects of Neighborhood Contextual Variables

In Hypotheses 8a, 8b, 8c, and 8d, I predicted that parental incarceration would have stronger and more significant negative effects on the primary dependent variable among respondents who, at Wave I, lived in: 1) neighborhoods with a modal racial category of black, 2) neighborhoods with a higher proportion of Hispanic residents, 3) neighborhoods that were urban, and 4) neighborhoods with higher levels of poverty.

Hypothesis 8a was partially supported because, in the full sample and male subsample, the effects of Wave I PI duration on Wave IV educational attainment were significant and negative among respondents who lived in a modal black neighborhood at Wave I, but not significant among respondents who did not live in a modal black neighborhood at Wave I. This finding also supports the resiliency hypothesis presented in the literature, which asserts that both incarceration and parental incarceration have more significant negative effects on desirable outcomes in neighborhoods with a higher proportion of minority residents because it adds to existing disadvantage in those neighborhoods.

The variable representing the proportion of Hispanic residents in respondents' neighborhoods moderated effect of Wave IV PI dummy on Wave IV educational attainment in the male subsample. However, this finding did not support Hypothesis 6b. In fact, it directly contradicted it. Wave IV PI dummy had a significant negative effect on Wave IV educational attainment among respondents who lived in neighborhoods with

the lowest proportions of Hispanic residents, but it did not have a significant effect on educational attainment among respondents who lived in neighborhoods with the highest proportions of Hispanic residents. This supports the alternative to the double-jeopardy. Cumulative disadvantage, and disadvantage saturation hypotheses, the resiliency hypothesis, which asserts that the deleterious effects of incarceration and parental incarceration are stronger in neighborhoods with fewer minority residents because: 1) incarceration is less common and carries more stigma, and 2) residents in these neighborhoods have further to drop down the socioeconomic ladder as a result of incarceration and parental incarceration.

Urbanicity significantly moderated more relationships than any other neighborhood contextual variable. The nature of the moderating effects of urbanicity varied by gender, but not race. Among females, urban neighborhood significantly moderated the effects of: 1) Wave I PI dummy on Wave IV occupational prestige, 2) the effects of Wave IV PI dummy on Wave IV occupational prestige, and 3) the effects of Wave IV PI dummy on Wave IV educational attainment. Urban neighborhood moderated all of these effects in such a way that the effect of the parental incarceration variable was significant and negative among females who lived in nonurban neighborhoods, but not significant among females who lived in urban neighborhoods.

The findings described above contradicted Hypothesis 6c. However, partial support for Hypothesis 6c was found in the male subsample, white subsample, and black subsample. In the male subsample and white subsample, urban neighborhood moderated the effects of Wave IV PI dummy on Wave IV occupational prestige such that it had a significant negative effect among respondents who lived in urban neighborhoods, but a

nonsignificant effect among respondents who lived in nonurban neighborhoods. Among black respondents, urban neighborhood moderated the effects of Wave IV PI dummy on Wave IV educational attainment in the same manner.

The differential moderating effects of urbanicity by gender suggest that gender may condition the conditioning effects of urbanicity. More research is needed to examine why parental incarceration has more deleterious effects on nonurban females, but less deleterious effects on nonurban males.

Theoretical Implications

The implications of this study on sociological theory are many. However, they can be broken into two different, but connected types: 1) implications for theories of social class and social closure, and 2) implications for criminological theory. First, this study revealed that parental incarceration may act as a mechanism of social closure that helps solidify social class boundaries. Many of the analyses revealed that respondents who experienced parental incarceration, especially those who experienced before they became adults, experienced diminished socioeconomic life chance and had lower rates of upward social mobility than their peers who did not experience parental incarceration. Thus, it supports the assertion of myself and others that parental incarceration acts as forces of social closure, shutting off social economic opportunities among those who experience it. This study revealed two major mechanisms through which parental incarceration brings about social closure. First, the mediating effects of Wave I household income (and other measures of parent SES at Wave I) in the relationship between Wave I parental incarceration and Wave IV measures of SES revealed that

parental incarceration during childhood and adolescence brings about social closure by setting of a process of cumulative disadvantage that eventually creates disparities in SES during adulthood. Second, the mediating effects of adult arrests in the relationship between childhood parental incarceration and Wave IV measures of SES revealed that the intergenerational transmission of offending is also one mechanism through which parental incarceration produces social closure and solidifies class boundaries.

This study also has significant implications for criminological theory. The finding that parental incarceration increased the likelihood of criminal justice contact is not groundbreaking. Several theoretical and empirical works have made this connection using theories like Agnew's (1992) general strain theory. Several other studies have examined the relationship between reciprocal relationships between criminal justice contact and social class. However, no known studies have examined the mediating effects of criminal justice contact in the relationship between parental incarceration and social mobility. The finding that criminal justice contact provided such a strong link between parental incarceration SES outcomes is novel. It demonstrates not only that there are links between parent and child offending and criminal justice contact, but that those links have potential consequences for the overall class structure of society because they solidify social class boundaries. Then, as demonstrated by much of the research on the effects of social class on crime (especially research at the macro-level), those more solid class boundaries may also produce more crime.

Policy Implications

Several policy implications can be drawn from the findings of this study. First, the finding that parental incarceration hinders socioeconomic mobility may be useful when policymakers discuss new criminal justice policies that would either reduce or increase incarceration. Many argue that the potential collateral consequences of the incarceration boom of the past 40 years were not properly explored. Consideration of the findings of this study and other studies may prevent that from happening in the future.

Second, this study identifies several factors that mediate and moderate the effects parental incarceration affects social mobility. Identifying the factors that mediate and moderate this relationship could help policymakers and practitioners who wish to lessen the deleterious effect of parental incarceration. They could use this information to create and implement policies and practices that 1) minimize the deleterious effects of parental incarceration on social class outcomes and 2) screen for factors that make children most likely to experience those effects.

This study suggests that the three major mediating and moderating factors in the relationship between parental incarceration and social mobility are early economic disadvantage, criminal justice contact, and social support. The findings of this study suggest that parental incarceration often hinders upward social mobility by creating early economic disadvantage. This study also suggests that the negative effects of parental incarceration on upward social mobility are stronger among those who face early economic disadvantage. In other words, early economic disadvantage exacerbates the effects of parental incarceration. Policymakers and practitioners could use this information to create and adopt policies and practices, shown in other literatures to be

effective in creating opportunities for disadvantaged youth, that target children of parents who've been incarcerated as an at-risk population and that target children of parents who've been incarcerated *and* face early economic disadvantage as a group with an even greater level of risk.

The findings of this study also suggest that parental incarceration hinders upward social mobility by increasing the likelihood of a child's contact with the criminal justice system (and all of its collateral social and economic consequences) when they reach adulthood. They also suggest that the negative effects of parental incarceration on social class outcomes are greater among those who've had more contact with the criminal justice system during adulthood. This set of findings could also be used by policymakers and practitioners to identify children of parents who've been incarcerated as an at-risk group and implement targeted strategies shown to be effective at preventing criminal offending. One example is a mentoring program specifically designed for children of incarcerated parents.

The findings of this study also suggest that parental incarceration has a negative effect on social support during childhood which then has a negative effect on social class outcomes. They also suggest that the negative effects of parental incarceration on upward social mobility are weaker among those with higher levels of social support during childhood. Policymakers and practitioners could use this information to implement policies and practices that attempt to increase the social support provided for children of parents whose parents have been incarcerated. Another potential policy implication is to direct elevated levels of attention, funding, and programming to the children of incarcerated parents that have the lowest levels of social support. Increasing

social support for children of incarcerated parents could also weaken the effects of parental incarceration on early economic disadvantage, the effects of early economic disadvantage on adult social class outcomes, the effects of parental incarceration on criminal justice contact, and the effects of criminal justice contact on adult social class outcomes.

A final set of policy implications derives from a comparison of the effects of the prevalence of parental incarceration and the duration of parental incarceration found in this study. The findings of this study suggest that the experience of parental incarceration has a generally negative effect on upward socioeconomic mobility (and that factors like early economic disadvantage, criminal justice contact, and social support significantly mediate and moderate this relationship). However, the findings of this study also suggest that the duration of parental incarceration, among those who've experienced it, has only limited effects on social mobility and that the other factors examined in this study play a limited mediating and moderating role in this relationship.

This is an important set of findings because it indicates that even a brief spell of parental incarceration can hinder upward social mobility. While further research needs to be conducted on the effects of various characteristics of parental incarceration (e.g., duration, offense type, institution type), it appears that children experiencing of parental incarceration of any length may also experience its deleterious effects. This further indicates that parental incarceration may have a largely symbolic, stigmatizing effect on children. The family of a child whose parent has been incarcerated for a short period of time such as one month may not face the same direct long-term economic consequences as the family of a child whose parent has been incarcerated for several years. However,

the stigmatizing effects of the incarceration (and all of the other consequences of that stigmatization) may be nearly equal. Thus, policymakers and practitioners wishing to soften the social and economic blow of parental incarceration should be aware of this and develop policies and practices that are available for all children of parents who've been incarcerated, not just children of parents who've been incarcerated for long periods of time.

Limitations

Add Health Sample

This study had several limitations. First, as suggested by Roettger and Swisher (2011), the sampling design of Add Health may lead to an under-sampling of individuals who experienced parental incarceration. Also, I employed the public-use Add Health data. Using the full, restricted-use data would have increased the sample size and the likelihood that the sample is representative of the cohort of U.S. residents who were adolescents in the U.S. in the mid-1990's. It would have also likely increased the representation of individuals who had experienced parental incarceration. Finally, using the restricted-use data would have increased the size of the gender and race subsamples. The size of the sample I analyzed often dropped below 100, especially when I was examining the black subsample and/or only those respondents whose had been incarcerated only once prior to a given point in time (i.e., in analyses of the effects of parental incarceration duration). Having larger subsamples may have produce more robust and accurate results.

Measures Used

Several of the limitations of this study were related to deficiencies in the measures available in the Add Health data. The first, and most important, set of deficiencies had to do with Add Health's questions concerning parental incarceration. However, several other measures employed in this study also introduced limitations. The lack of availability and inclusion of some theoretically relevant measures introduced some limitations, too.

I measured parental incarceration using the questions Add Health asked about parental incarceration at Wave IV. These questions were retrospective in nature. The validity of these measures were questionable because the appraisals of parental incarceration came from respondents, not from the individuals who experienced it. It is possible that respondents inaccurately recalled the prevalence, timing, duration, and/or frequency of their parents' incarceration. Respondents may have engaged in forward telescoping, in which they remembered and reported their parents' incarceration start and/or end as occurring more recent than they actually did, or backward telescoping, in which they remembered and reported their parents' incarceration start and/or end as occurring earlier than they actually did.

Also, Add Health only asked respondents to report how old they were when their parent was first incarcerated and how old they were when their parent was most recently released from prison or jail. Because many respondents reported that their parents had been incarcerated more than once, and Add Health did not ask questions that would allow me to calculate the length of each spell of incarceration, I was not able to accurately

calculate the total parental incarceration duration for a large portion of respondents whose parents were incarcerated.

I was only able to examine the effects of parental incarceration among those respondents whose parents were incarcerated only once. It is possible that this may have biased my results because the effects of parental incarceration duration may have been different for those respondents whose parents were incarcerated multiple times.

The questions regarding respondents' ages at the first entrance/last release of their parents to/from prison or jail did not produce very precise measures of parental incarceration duration. Some respondents may have had a parent that served one day in a county jail. Others respondents may have had a parent who served 11 months in a county jail. In my study, these two types of respondents may have been coded in the same exact way. The imprecision in the measurements of parental incarceration duration also limited the precision of my estimates of the effects of parental incarceration.

I combined the measures of mothers' and fathers' incarceration to create more general measures of parental incarceration. Many of the studies discussed in Chapter II indicated the effects of maternal incarceration differed significantly from the effects of paternal incarceration. I was not able to examine such differences using the measures I employed in this study.

I also only examined the effects of the incarceration of biological parents. It is possible that several respondents experienced the incarceration of a close family member or parent figure who was not a biological parent yet, in this study, these respondents were coded the same as respondents who experienced no type of familial incarceration.

Finally, some of the studies reviewed in Chapter II indicated that the direction of the effect of parental incarceration on children's behavior, academic performance, offending, etc., varies significantly by the type of crime for which a parent was incarcerated (see Travis and Western 2014 for review). Neither Add Health nor I included any measures of the type of criminal offense for which parents were incarcerated. By coding respondents whose parents were incarcerated for a minor drug offense the same as respondents whose parents were incarcerated for a serious violent offense, I may have obscured some of the complexity of the effects of parental incarceration.

Measures Omitted

There were several factors that were not examined in this study, but may have moderated and/or mediated the effects of parental incarceration on socioeconomic outcomes. For example, the moderating effects of the level of involvement a parent who was incarcerated had in a respondents' life prior to their incarceration was not assessed in this study. Other factors, such as the attachment of respondents to their parents and the amount of contact respondents had with their parents, may have moderated the effects of parental incarceration on socioeconomic outcomes. However, they were not included in this study. Add Health provided measures of some of these types of concepts. However, they were specific to mothers and fathers. Because I combined the measures of maternal and paternal incarceration, I was not able to accurately determine if a variable, like the level of attachment of a respondent to an incarcerated parent, moderated and/or mediated the effects of parental incarceration on a measure socioeconomic status.

Several other factors, besides the characteristics of the relationships between parents and respondents, may have mediated and moderated the relationship between parental incarceration and socioeconomic outcomes during young adulthood. However, they were not included in this study. For example, several studies have indicated that parental incarceration negatively affects academic performance during childhood. Several other studies have indicated that academic performance during childhood affects social economic life chances later in the life course. Investigating the potential mediating role of academic performance during childhood/adolescence may add to the understanding of how parental incarceration affects social mobility.

Several of the mediating and moderating variables that were examined in this study were assessed at Wave IV, when respondents were ages 24 to 32. However, most of the instances of parental incarceration reported by Add Health respondents began and ended before they were age 18. Thus, it is likely that my analyses did not assess the most proximate effects of parental incarceration on these variables. It is also possible that my analyses did not capture some of the beginnings of a process of cumulative disadvantage that parental incarceration may have started by affecting things like social isolation, social exclusion, and negative emotions.

Temporal Ordering

Finally, I made several assumptions about the temporal ordering of the relationships between the variables I examined in this study. It is possible that those assumptions were incorrect. For example, in interpreting my results regarding the significant negative effects of Wave IV PI dummy on Wave IV occupational prestige, I

assumed that parental incarceration occurred before, and affected a change in, occupational prestige. It is possible that, for many respondents, this temporal ordering was reversed. It is possible that many respondents were already set in an occupation with a low level of prestige before their parent was incarcerated and that parental incarceration had no effect on their occupational prestige.

Directions for Future Research

The limitations described above provide a guide for future research on the effects of parental incarceration on intragenerational and intergenerational mobility. First, in the future, researchers examining the effects of parental incarceration should employ measures that more accurately assess the duration and intensity of the experience of parental incarceration. They can do this by asking questions about the duration of each spell of incarceration and by asking questions that directly assess individuals' interpretations of their parents' incarceration.

To remedy the problem of inaccurate reporting in the assessment of the effects of parental incarceration on mobility, researchers should: 1) employ measures of parental incarceration throughout longitudinal data collection efforts that follow respondents throughout the life course, 2) employ measures of parental incarceration that include questions asked of parents themselves (this could be easily done in studies that use multi-generational samples), and 3) employ both self-report and official measures of parental incarceration.

Researchers should also employ measures that would allow them to examine whether or not the effects of parental incarceration on mobility vary by the type of crime

for which parents were incarcerated. These measures would be valuable in assessing some of the nuances of the general effects of parental incarceration on social mobility that were uncovered in this study

Future analyses should also include differences in the effects of parental incarceration on mobility by the gender of the parent who is incarcerated and the characteristics of the relationship between the parent and child. Future research should also include analyses of the effects of other forms of familial incarceration. Finally, future research should examine the effects of other factors, such as academic performance, social isolation, negative emotions, physical health, housing placement after parental incarceration, etc., that may mediate and moderate the effects of parental incarceration on social mobility. Past research has shown that the effects of parental incarceration are quite complex. Studies that include these variables would dramatically improve the understanding of such complex relationships. They may also inform public policies that may prevent or ameliorate the negative consequences of parental incarceration many individuals experience.

REFERENCES

- Apel, Robert, and Gary Sweeten. 2010. "The Impact of Incarceration on Employment During the Transition to Adulthood." *Social Problems* 57(3):448–479.
- 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 & Social Psychology* 51(6):1173–1182.
- Baumeister, Roy F., Jennifer D. Campbell, Joachim I. Krueger, and Kathleen D. Vohs. 2003. "Does High Self-Esteem Cause Better Performance, Interpersonal Success, Happiness, or Healthier Lifestyles?" *Psychological Science in the Public Interest* 4(1):1–44.
- Bendix, Reinhard. 1989. *Embattled Reason: Essays on Social Knowledge*. New Brunswick, NJ: Transaction Publishers.
- Benson, Michael L. 1984. "The Fall from Grace." *Criminology* 22(4):573–593.
- Boswell, Gwyneth, and Peter Wedge. 2001. *Imprisoned Fathers and their Children*. London and Philadelphia: Jessica Kingsley Pub.
- Bushway, Shawn D. 1998. "The Impact of an Arrest on the Job Stability of Young White American Men." *Journal of Research in Crime and Delinquency* 35(4):454–479.
- Cho, Rosa Minhyo. 2009a. "Impact of Maternal Imprisonment on Children's Probability of Grade Retention." *Journal of Urban Economics* 65(1):11–23.
- Cho, Rosa Minhyo. 2009b. "The Impact of Maternal Imprisonment on Children's Educational Achievement: Results from Children in Chicago Public Schools." *Journal of Human Resources* 44(3):772–797.
- Coleman, James S. 1988. "Social Capital in the Creation of Human Capital." *American Journal of Sociology* 94:S95–S120.
- Collins, Patricia Hill. 2010. "The New Politics of Community." *American Sociological Review* 75(1):7–30.
- Comfort, Megan. 2008. *Doing Time Together: Love and Family in the Shadow of the Prison*. Chicago: University Of Chicago Press.

- Comfort, Megan. 2007. "Punishment Beyond the Legal Offender." *Annual Review of Law & Social Science* 3:271–96.
- Davies, Scott, and Julian Tanner. 2003. "The Long Arm of the Law: Effects of Labeling on Employment." *The Sociological Quarterly* 44(3):385–404.
- Dempster, A.P., N.M. Laird, and D.B. Rubin. 1977. "Maximum Likelihood from Incomplete Data via the EM Algorithm." *Journal of the Royal Statistical Society* 39:1–38.
- Enders, Craig K. 2001. "A Primer on Maximum Likelihood Algorithms Available for Use with Missing Data." *Structural Equation Modeling* 8(1): 128–141.
- Farrington, David P., Jeremy W. Coid, and Joseph Murray. 2009. "Family Factors in the Intergenerational Transmission of Offending." *Criminal Behaviour and Mental Health* 19(2):109–124.
- Foster, Holly, and John Hagan. 2007. "Incarceration and Intergenerational Social Exclusion." *Social Problems* 54(4):399–433.
- Fritsch, Travis A., and John D. Burkhead. 1981. "Behavioral Reactions of Children to Parental Absence due to Imprisonment." *Family Relations* 30(1):83–88.
- Ganzeboom, Harry B. G., Donald J. Treiman, and Wout C. Ultee. 1991. "Comparative Intergenerational Stratification Research: Three Generations and Beyond." *Annual Review of Sociology* 17:277–302.
- Geller, Amanda, Irwin Garfinkel, Carey E. Cooper, and Ronald B. Mincy. 2009. "Parental Incarceration and Child Well-Being: Implications for Urban Families." *Social Science Quarterly* 90(5):1186–1202.
- Geller, Amanda, Irwin Garfinkel, and Bruce Western. 2008. *Incarceration and Support for Children in Fragile Families*. Princeton University, Woodrow Wilson School of Public and International Affairs, Center for Research on Child Wellbeing. Retrieved May 14, 2012 (<http://ideas.repec.org/p/pri/crcwel/1079.html>).
- Giddens, Anthony. 1982. "Class Structuration and Class Consciousness." Pp. 157–174 in *Classes, Power and Conflict: Classical and Contemporary Debates*, edited by Anthony Giddens and David Held. Berkeley, CA: University of California Press.
- Giddens, Anthony. 1973. *The Class Structure of the Advanced Societies*. 1st ed. London: Hutchinson.
- Glaze, Lauren E., and Laura M. Maruschak. 2008. *Parents in Prison and their Minor Children*. Washington DC: U.S. Dept of Justice Bureau of Justice Statistics United States Retrieved May 24, 2012 (<http://bjs.ojp.usdoj.gov/content/pub/pdf/pptmc.pdf>).

- Goffman, Erving. 1963. *Stigma: Notes on the Management of Spoiled Identity*. New York: Simon and Schuster.
- Grogger, Jeffrey. 1995. "The Effect of Arrests on the Employment and Earnings of Young Men." *The Quarterly Journal of Economics* 110(1):51–71.
- Guerino, Paul, Paige M. Harrison, and William J. Sabol. 2011. *Prisoners in 2011*. Washington, DC: U.S. Department of Justice: Bureau of Justice Statistics Retrieved May 14, 2012 (<http://bjs.ojp.usdoj.gov/content/pub/pdf/p10.pdf>).
- Hagan, John, and Holly Foster. 2012a. "Children of the American Prison Generation: Student and School Spillover Effects of Incarcerating Mothers." *Law & Society Review* 46(1):37–69.
- Hagan, John, and Holly Foster. 2012b. "Intergenerational Educational Effects of Mass Imprisonment in America." *Sociology of Education* 85(3):259–286.
- Hairston, Creasie Finney. 2007. *Focus on Children with Incarcerated Parents: An Overview of the Research Literature*. Baltimore, MD: The Annie E. Casey Foundation Retrieved January 21, 2010 (<http://www.aecf.org/~media/Pubs/Topics/Special%20Interest%20Areas/Incarceration%20and%20Reentry/FocusonChildrenwithIncarceratedParentsAnOverv/HAIRSTON.pdf>).
- Haney, Craig. 2002. "The Psychological Impact of Incarceration: Implications for Post-Prison Adjustment." Retrieved June 27, 2011 (<http://www.urban.org/publications/410624.html>).
- Hannon, Lance. 2003. "Poverty, Delinquency, and Educational Attainment: Cumulative Disadvantage or Disadvantage Saturation?" *Sociological Inquiry* 73(4):575–594.
- Haskins, Anna. 2011. *Unintended Consequences of Mass Imprisonment: Effects of Paternal Incarceration On Child School Readiness*. Bendheim-Thoman Center for Research on Child Wellbeing (CRCW), Princeton University Retrieved May 14, 2012.
- Hochstetler, Andy, Daniel S. Murphy, and Ronald L. Simons. 2004. "Damaged Goods: Exploring Predictors of Distress in Prison Inmates." *Crime & Delinquency* 50(3):436–457.
- Holzer, Harry J., Paul Offner, and Elaine Sorensen. 2005. "Declining employment among young black less-educated men: The role of incarceration and child support." *Journal of Policy Analysis and Management* 24(2):329–350.
- Huebner, Beth M. 2005. "The Effect of Incarceration on Marriage and Work Over the Life Course." *JQ: Justice Quarterly* 22(3):281–303.

- 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(3):283–296.
- Johnson, Rucker C. 2009. "Ever-Increasing Levels of Parental Incarceration and the Consequences for Children." Pp. 177–206 in *Do prisons make us safer? The benefits and costs of the prison boom*, edited by Steven Raphael, Michael A. Stoll, and Shawn D. Bushway.
- Kaeble, Danielle, Lauren Glaze, Anastasios Tsoutsis, and Todd Minton. 2015. *Correctional Population in the United States, 2014*. Washington, DC: U.S. Department of Justice: Bureau of Justice Statistics Retrieved June 14, 2016 (<http://www.bjs.gov/content/pub/pdf/cpus14.pdf>).
- Kerley, Kent R., Michael L. Benson, Matthew R. Lee, and Francis T. Cullen. 2004. "Race, Criminal Justice Contact, and Adult Position in the Social Stratification System." *Social Problems* 51(4):549–568.
- Kerley, Kent R., and Heith Copes. 2004. "The Effects of Criminal Justice Contact on Employment Stability for White-Collar and Street-Level Offenders." *International Journal of Offender Therapy and Comparative Criminology* 48(1):65–84.
- Kinner, Stuart A., Rosa Alati, Jake M. Najman, and Gail M. Williams. 2007. "Do Paternal Arrest and Imprisonment Lead to Child Behaviour Problems and Substance Use? A Longitudinal Analysis." *Journal of Child Psychology and Psychiatry* 48(11):1148–1156.
- Kling, Jeffrey R. 2006. *Incarceration Length, Employment & Earning*.
- Lalonde, Robert, and Rosa Cho. 2008. "The Impact of Incarceration in State Prison on the Employment Prospects of Women." *Journal of Quantitative Criminology* 24(3):243–265.
- Lanier, C. S. 1993. "Affective States of Fathers in Prison." *Justice Quarterly* 10(1):49.
- Laub, John H., and Robert J. Sampson. 1997. "A Life Course Theory of Cumulative Disadvantage." Pp. 133–61 in *Developmental Theories of Crime And Delinquency*, edited by Terence P. Thornberry. New Brunswick, NJ: Transaction Publishers.
- La Vigne, Nancy G., Rebecca L. Naser, Lisa E. Brooks, and Jennifer L. Castro. 2005. "Examining the Effect of Incarceration and In-Prison Family Contact on Prisoners' Family Relationships." *Journal of Contemporary Criminal Justice* 21(4):314–335.

- Lin, Nan. 1999. "Social Networks and Status Attainment." *Annual Review of Sociology* 25:467–487.
- Lindquist, Christine H. 2000. "Social Integration and Mental Well-Being Among Jail Inmates." *Sociological Forum* 15(3):431–455.
- Lott Jr., John R. 1992. "An Attempt at Measuring the Total Monetary Penalty from Drug Convictions: The Importance of an Individual's Reputation." *Journal of Legal Studies* 21(1):159.
- Lowenstein, Ariela. 1986. "Temporary Single Parenthood: The Case of Prisoners' Families." *Family Relations* 35(1):79.
- Manza, Jeff. 1992. "Classes, Status Groups, and Social Closure: A Critique of Neo-Weberian Social Theory." Pp. 275–302 in *Current Perspectives in Social Theory*, vol. 12, edited by Ben Agger. Greenwich, CT: JAI.
- Mauer, Marc. 1999. *Race to Incarcerate*. 1st ed. New York: The New Press.
- Moerk, Ernst L. 1973. "Like father like son: Imprisonment of fathers and the psychological adjustment of sons." *Journal of Youth and Adolescence* 2(4):303–312.
- Monk-Turner, Elizabeth. 1989. "Effects of High School Delinquency on Educational Attainment and Adult Occupational Status." *Sociological Perspectives* 32(3):413–418.
- 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(12):1269–1278.
- Murray, Joseph, and David P. Farrington. 2008. "Parental Imprisonment: Long-Lasting Effects on Boys' Internalizing Problems Through the Life Course." *Development and Psychopathology* 20(01):273–290.
- 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(2):175–210.
- Murray, Joseph, Carl-Gunnar Janson, and David P. Farrington. 2007. "Crime in Adult Offspring of Prisoners." *Criminal Justice and Behavior* 34(1):133–149.
- Murray, Joseph, Rolf Loeber, and Dustin Pardini. 2012. "Parental Involvement in the Criminal Justice System and the Development of Youth Theft, Marijuana Use, Depression, and Poor Academic Performance." *Criminology* 50(1):255–302.

- Nagin, Daniel, and Joel Waldfogel. 1995. "The Effects of Criminality and Conviction on the Labor Market Status of Young British Offenders." *International Review of Law & Economics* 15(1):109–126.
- Naser, R. L, and C. A. Visser. 2006. "Family Members' Experiences with Incarceration and Reentry." *Western Criminology Review* 7(2):20–31.
- Needels, Karen E. 1996. "Go Directly to Jail and Do Not Collect? a Long-Term Study of Recidivism, Employment, and Earnings Patterns Among Prison Releasees." *Journal of Research in Crime and Delinquency* 33(4):471–496.
- Pager, Devah. 2003. "The Mark of a Criminal Record." *American Journal of Sociology* 108(5):937–975.
- Parkin, Frank. 1979. *Marxism and Class Theory: A Bourgeois Critique*. Tavistock.
- Paternoster, Raymond, Robert Brame, Paul Mazerolle, and Alex Piquero. 1998. "Using the Correct Statistical Test for the Equality of Regression Coefficients." *Criminology* 36(4):859–866.
- Petit, Becky, and Bruce Western. 2004. "Mass Imprisonment and the Life Course: Race and Class Inequality in U.S. Incarceration." *American Sociological Review* 69(2):151–169.
- Pettit, Becky, and Christopher J. Lyons. 2009. "Incarceration and the Legitimate Labor Market: Examining Age-Graded Effects on Employment and Wages." *Law & Society Review* 43(4):725–756.
- Phillips, Susan D., Barbara J. Burns, H. Ryan Wagner, Teresa L. Kramer, and James M. Robbins. 2002. "Parental Incarceration Among Adolescents Receiving Mental Health Services." *Journal of Child and Family Studies* 11(4):385–399.
- Poehlmann, Julie. 2005. "Incarcerated Mothers' Contact with Children, Perceived Family Relationships, and Depressive Symptoms." *Journal of Family Psychology* 19(3):350–357.
- Rodriguez, Nancy, Hilary Smith, and Marjorie S Zatz. 2009. "'Youth Is Enmeshed in a Highly Dysfunctional Family System': Exploring the Relationship Among Dysfunctional Families, Parental Incarceration, and Juvenile Court Decision Making." *Criminology* 47(1):177–208.
- Roettger, Michael E. 2009. "Parental Incarceration and Adversity in Young Adulthood." *Corrections Today* 71(6):18–20.

- Roettger, Michael E. 2007. "An Emerging Felon Class? Intergenerational Crime and Mobility Among a Nationally-Representative Cohort of Young Adult Men." Presented at the annual meeting of the American Sociological Association, August 11, New York, NY.
- 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(4):1109–1147.
- Rosenberg, Morris. 1965. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.
- Sack, W H. 1977. "Children of Imprisoned Fathers." *Psychiatry* 40(2):163–174.
- Sack, W. H, J Seidler, and S Thomas. 1976. "The Children of Imprisoned Parents: A Psychosocial Exploration." *The American Journal of Orthopsychiatry* 46(4):618–628.
- Sampson, Robert J., and John H. Laub. 1990. "Crime and Deviance Over the Life Course: The Salience of Adult Social Bonds." *American Sociological Review* 55(5):609–627.
- Schwartz-Soicher, Ofira, Amanda Geller, and Irwin Garfinkel. 2011. "The Effect of Paternal Incarceration on Material Hardship." *The Social Service Review* 85(3):447-473.
- Sobel, Michael E. 1982. "Asymptotic Confidence Intervals for Indirect effects in Structural Equation Models." *Sociological Methodology* 13:290–312.
- Tanner, Julian, Scott Davies, and Bill O'Grady. 1999. "Whatever Happened to Yesterday's Rebels? Longitudinal Effects of Youth Delinquency on Education and Employment." *Social Problems* 46(2):250–274.
- Thornberry, Terence P., and R. L. Christenson. 1984. "Unemployment and Criminal Involvement: An Investigation of Reciprocal Causal Structures." *American Sociological Review* 49(3):398–411.
- Travis, Jeremy and Bruce Western, eds. 2014. *The Growth of Incarceration in the United States: Exploring Causes and Consequences*. Washington, DC: The National Academies Press.
- Trice, Ashton D., and JoAnne Brewster. 2004. "The Effects of Maternal Incarceration on Adolescent Children." *Journal of Police and Criminal Psychology* 19(1):27–35.
- United States Department of Labor. 2012. "Bureau of Labor Statistics Consumer Price Index." Retrieved December 20, 2012 (<http://www.bls.gov/cpi/data.htm>).

- Wacquant, Loïc. 2001. "Deadly Symbiosis When Ghetto and Prison Meet and Mesh." *Punishment & Society* 3(1):95–133.
- Wakefield, Sara, and Christopher Uggen. 2010. "Incarceration and Stratification." *Annual Review of Sociology* 36(1):387–406.
- Wakefield, Sara and Christopher Wildeman. 2014. *Children of the Prison Boom: Mass Incarceration and the Future of American Inequality*. New York Oxford University Press.
- Waldfoegel, Joel. 1994. "The Effect of Criminal Conviction on Income and the Trust 'reposed in the Workmen'." *Journal of Human Resources* 29(1):62–81.
- Walmsley, Roy. 2009. *World Population List*. London, UK: International Centre for Prison Studies Retrieved May 14, 2012 (International Centre for Prison Studies).
- Weber, Max. 1946. *From Max Weber: Essays in Sociology*. 1st ed. edited by G. Wright Mills and H. H. Gerth. New York: Oxford University Press.
- Weber, Max. 1978. *Wirtschaft und Gesellschaft*. University of California Press.
- Western, Bruce. 2007. *Punishment and Inequality in America*. Russell Sage Foundation.
- Western, Bruce. 2002. "The Impact of Incarceration on Wage Mobility and Inequality." *American Sociological Review* 67(4):526–546.
- Western, Bruce, and Becky Pettit. 2005. "Black-White Wage Inequality, Employment Rates, and Incarceration." *American Journal of Sociology* 111(2):553–578.
- Western, Bruce, and Becky Pettit. 2000. "Incarceration and Racial Inequality in Men's Employment." *Industrial & Labor Relations Review* 54(1):3–16.
- Wiesner, Margit, Hyoun K. Kim, and Deborah M. Capaldi. 2010. "History of Juvenile Arrests and Vocational Career Outcomes for At-Risk Young Men." *Journal of Research in Crime & Delinquency* 47(1):91–117.
- Wildeman, Christopher. 2009. "Parental Imprisonment, the Prison Boom, and the Concentration of Childhood Disadvantage." *Demography* 46(2):265–280.
- Wildeman, Christopher. 2010. "Paternal Incarceration and Children's Physically Aggressive Behaviors: Evidence from the Fragile Families and Child Wellbeing Study." *Social Forces* 89(1):285–309.
- Wilson, William Julius. 1990. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. University of Chicago Press.

Wooldredge, John D. 1999. "Inmate Experiences and Psychological Well-Being."
Criminal Justice and Behavior 26(2):235–250.

APPENDIX A

CODING SCHEME FOR WAVE IV EDUCATIONAL ATTAINMENT

Wave IV educational attainment coding

- did not go to school=0
- 8th grade or less=1
- some high school (respondents); more than eighth grade, but did not graduate from high school (parents)=2
- went to a business, trade, or vocational school (instead of high school)=3
- high school graduate/GED=4
- vocational/technical training (after high school)=5
- some college=6
- completed college (bachelor's degree)=7
- professional training beyond a four-year college or university=8

APPENDIX B

CODING SCHEME FOR INDICATORS IN WAVE I SOCIAL SUPPORT SCALE

Wave I Social Support

Coding: 1) not at all, 2) very little, 3) somewhat, 4) quite a bit, 5) very much

Items:

- How much do you feel that adults care about you?
- How much do you feel that your teachers care about you?
- How much do you feel that your parents care about you?
- How much do you feel that your friends care about you?
- How much do you feel that people in your family understand you?
- How much do you feel that you want to leave home?
- How much do you feel that you and your family have fun together?
- How much do you feel that your family pays attention to you?

Cronbach's alpha: .957

APPENDIX C

CODING SCHEMA FOR PARENT SOCIOECONOMIC STATUS VARIABLES

Parent educational attainment coding

- did not go to school=0
- 8th grade or less=1
- some high school (respondents); more than eighth grade, but did not graduate from high school (parents)=2
- went to a business, trade, or vocational school (instead of high school)=3
- high school graduate/GED=4
- vocational/technical training (after high school)=5
- some college=6
- completed college (bachelor's degree)=7
- professional training beyond a four-year college or university=8

Parent occupational prestige coding

- professional 1, such as doctor, lawyer, scientist=4
- professional 2, such as teacher, librarian, nurse=4
- manager, such as executive, director=4
- technical, such as computer specialist, radiologist=4
- office worker, such as bookkeeper, office clerk, secretary=3
- sales worker, such as insurance agent, store clerk=3
- restaurant worker or personal service, such as waitress, housekeeper=1
- craftsperson, such as toolmaker, woodworker=2
- construction worker, such as carpenter, crane operator=1
- mechanic, such as electrician, plumber, machinist=2
- factory worker or laborer, such as assembler, janitor=1
- transportation, such as bus driver, taxi driver=1
- military or security, such as police officer, soldier, fire fighter=2
- farm or fishery worker=1

APPENDIX D
CODING SCHEMA FOR INDICATORS IN SCALES FOR WAVE IV EMOTIONS
VARIABLES

Wave IV Depression

Coding: 0) never or rarely, 1) sometimes, 2) a lot of the time, 3) most of the time or all of the time

Items:

- (During the past seven days:) You were bothered by things that usually don't bother you
- (During the past seven days:) You could not shake off the blues, even with help from your family and your friends
- (During the past seven days:) You had trouble keeping your mind on what you were doing
- (During the past seven days) You felt depressed
- (During the past seven days) You felt sad

Cronbach's alpha: .789

Wave IV Anger

Coding: 1) strongly agree, 2) agree, 3) neither agree nor disagree, 4) disagree, 5) strongly disagree

Items:

- I get angry easily* ("Do you agree or disagree?")
- I rarely get irritated ("Do you agree or disagree?")
- I lose my temper* ("Do you agree or disagree?")
- I keep my cool ("Do you agree or disagree?")

Cronbach's alpha: .762

Wave IV Stress

Coding: 0) never, 1) almost never, 2) sometimes, 3) fairly often, and 4) very often

Items:

- In the last 30 days, how often have you felt that you were unable to control the important things in your life?
- In the last 30 days, how often have you felt confident in your ability to handle your personal problems?*
- In the last 30 days, how often have you felt that things were going your way?*
- In the last 30 days, how often have you felt that difficulties were piling up so high that you could not overcome them?*

Cronbach's alpha: .704