

Supplement to:

Haskins, Anna R. 2014. “Unintended Consequences: Effects of Paternal Incarceration on Child School Readiness and Later Special Education Placement.” *Sociological Science* 1: 141-158.

**Appendix A**

Response Rates for Fragile Families and Child Wellbeing Study

	Mothers			Fathers		
	Overall	Married	Unmarried	Overall	Married	Unmarried
Baseline	86%	82%	87%	79%	89%	77%
Year 1	91%	91%	91%	74%	83%	71%
Year 3	88%	90%	88%	72%	83%	68%
Year 5	87%	88%	87%	70%	79%	67%
Year 9	76%			59%		

*Source:* Fragile Families and Child Wellbeing Study (Bendheim-Thoman Center for Research on Child Wellbeing 2008).

## Appendix B

Weighted Means and Standard Deviations (when appropriate) for Dependent and Independent Variables by Paternal Incarceration Status

Variable Names (range)	Father Never Incarcerated		Father Incarcerated				in OLS	in PSM
	Mean	SD	Before or by YR1		Btw YR1 & YR5			
<i>Outcome Variables</i>								
Non-cognitive Readiness (0-2)	1.64	(0.28)	1.54	(0.30)	1.54	(0.34)		
Standardized	0.20	(0.93)	-0.12	(0.99)	-0.13	(1.12)		
Cognitive Readiness (40-160)	101.85	(15.27)	92.40	(15.55)	88.42	(15.06)		
Standardized	0.54	(0.92)	-0.03	(0.94)	-0.27	(0.91)		
Special Education Placement at Year 9	.15		.16		.19			
<i>Demographic and Household Characteristics</i>								
child race Black	0.36		0.75		0.79		x	x
child race White	0.64		0.25		0.21		x	x
child gender Male	0.55		0.53		0.55		x	x
Low Birth Weight	0.06		0.12		0.08		x	
Maternal Cognitive (0-15)	7.78	(2.58)	6.69	(2.37)	6.82	(2.10)	x	
Maternal Age at 1st Birth (13-45)	25.18	(5.87)	20.00	(4.57)	19.75	(3.80)	x	
Mother Cohabiting with Father	0.15		0.32		0.31		x	x
Mother Married to Father	0.69		0.20		0.19		x	x
Grandparent in HH	0.13		0.36		0.32		x	
Number of Children in HH	1.04	(1.16)	1.48	(1.41)	1.38	(1.35)	x	
<i>Economic Indicators</i>								
Poverty Status (1-5)	1.91	(1.25)	3.35	(1.29)	3.32	(1.29)	x	x
Maternal Education (1-4)	2.83	(1.07)	1.89	(0.84)	1.89	(0.79)	x	
Living in Public Housing	0.04		0.14		0.18		x	
Neighborhood Unsafe	0.08		0.18		0.17		x	x
<i>Census Tract Characteristics</i>								
% of population White	0.55	(0.35)	0.33	(0.34)	0.33	(0.33)	x	x
% of population Black	0.31	(0.34)	0.54	(0.37)	0.54	(0.37)	x	x
% of female pop. of childbearing age	0.52	(0.07)	0.51	(0.06)	0.51	(0.06)	x	x
% of HHs female-headed w/ children <18	0.16	(0.13)	0.26	(0.16)	0.26	(0.15)	x	x
mean # of persons per HH	2.62	(0.50)	2.69	(0.43)	2.64	(0.44)	x	x
% of 25+ population with HS+ education	0.80	(0.14)	0.70	(0.13)	0.73	(0.12)	x	x
% of 25+ population with BA+ education	0.25	(0.18)	0.14	(0.11)	0.15	(0.14)	x	x
% of civilian labor force unemployed	0.08	(0.07)	0.12	(0.08)	0.12	(0.09)	x	x
% of housing units vacant	0.07	(0.05)	0.09	(0.07)	0.09	(0.07)	x	x
% of occupied housing units renter-occ	0.44	(0.25)	0.52	(0.22)	0.54	(0.23)	x	x
median housing value in dollars in 1999	133593	(122773)	82854	(55793)	91154	(85873)	x	x
% of HH on public assistance	0.05	(0.07)	0.09	(0.08)	0.09	(0.08)	x	x
% of families below poverty level in 1999	0.12	(0.13)	0.22	(0.16)	0.21	(0.15)	x	x
% of families w/ 1999 income <\$10K	0.08	(0.09)	0.15	(0.12)	0.15	(0.12)	x	x
% of families w/ 1999 income \$10-14,999	0.05	(0.04)	0.07	(0.04)	0.07	(0.04)	x	x

(cont.)

% of families w/ 1999 income \$15-24,999	0.11	(0.06)	0.15	(0.06)	0.16	(0.05)	x	x
% of families w/ 1999 income \$25-34,999	0.12	(0.05)	0.14	(0.05)	0.14	(0.04)	x	x
% of families w/ 1999 income \$35-49,999	0.16	(0.06)	0.17	(0.05)	0.16	(0.05)	x	x
% of families w/ 1999 income \$50-74,999	0.21	(0.08)	0.17	(0.08)	0.17	(0.07)	x	x
% of families w/ 1999 income \$75-99,999	0.12	(0.06)	0.08	(0.05)	0.08	(0.05)	x	x
% of families w/ 1999 income \$100-149,999	0.09	(0.07)	0.05	(0.04)	0.05	(0.05)	x	x
Interview City (20 indicator variables)							x	x
<i>Paternal Demographic, Psycho-Social, and Delinquent Behavior Characteristics</i>								
Paternal Age (15-53)	30.93	(6.83)	26.46	(6.76)	27.62	(8.06)		x
Father Employed	0.94		0.74		0.77			x
Father U.S. Citizen	0.90		0.98		0.88			x
Paternal Cognitive (0-15)	7.41	(2.58)	6.55	(2.45)	5.72	(2.63)	x	x
Paternal Education (1-4)	2.94	(0.93)	1.89	(0.76)	1.91	(0.79)	x	x
Paternal Self-Control (6-24)	18.68	(3.63)	16.62	(4.50)	17.31	(4.12)	x	x
Paternal Drug and Alcohol Problems	0.06		0.21		0.16		x	x
Paternal Domestic Violence	0.02		0.07		0.07		x	x
Father Incarcerated at Child's Birth	0.0		0.11		0.0		x	
Father had Two Bio-Parents in HH at 15	0.60		0.31		0.46			x
Father's Bio Father Involved	0.76		0.59		0.55			x
Father Lives in Public Housing	0.04		0.11		0.12			x
Paternal Multi-partner Fertility at YR1	0.20		0.49		0.46			x
Maternal Parenting Stress at YR1 (0-12)	4.55	(2.59)	4.97	(2.66)	4.70	(2.52)		x
Paternal Anxiety at YR1	0.03		0.06		0.04			x
Paternal Depression at YR1	0.09		0.19		0.05			x
Paternal Contact with Child at YR1 (0-30)	18.50	(14.18)	12.64	(13.89)	15.39	(13.79)		x
Non-cognitive Readiness: N=2602	n=1452		n=822		n=328			
Cognitive Readiness: N=1709	n=880		n=590		n=239			

*Note:* National weights are used; descriptive means provided include black and white children only using the non-cognitive readiness sample; YR1 and YR5 stand for Year 1 and Year 5 respectively. All variables above double line are measured at baseline or are assumed fixed characteristics. Variables below the double line are measured at YR1.<sup>1</sup>

<sup>1</sup> Cognitive ability, measured at wave 3 using the Wechsler Adult Intelligence Test, is treated as a fixed trait of parents. Based on the Dickman impulsivity scale, paternal self-control is reverse-scaled and consists of father reports of impulsive behaviors collected at wave 2; it is also assumed a fixed trait. Paternal domestic violence is based on mother's reports of if the focal child's father hit, slapped, or seriously hurt her at any point up to wave 2. Baseline paternal drug and alcohol abuse is indicated by combined mother and father reports of whether drinking or drugs have ever interfered with father's work or relationships, or if father ever sought help for a drug or alcohol problem. Maternal and paternal education categories are the following: 1=less than high school, 2=high school or equivalent, 3=some college, technical school, and 4=college or graduate degree. Poverty categories range from low (1) to high (5) and are measured as the percentage of income that is above the poverty line.

## Appendix C

### Scaled Variables, Components, and Respective Cronbach's Alphas

Scale Name (alpha)	Components
Non-cognitive Readiness (.835)	can't concentrate, can't pay attention can't sit still, is restless or hyperactive clings to adults or is too dependent cries a lot is disobedient doesn't get along with other children doesn't seem to feel guilty after misbehaving has trouble getting to sleep nervous, high strung, or tense is stubborn, sullen, or irritable has sudden changes in mood or feelings has temper tantrums or a hot temper is too fearful or anxious is unhappy, sad, depressed wants a lot of attention is withdrawn, doesn't get involved acts too young for their age
Paternal Self-Control (.842) <sup>2</sup>	often say whatever comes into head w/o thinking don't think enough before I act often say/do things w/o considering consequences often get into trouble b/c I don't think before I act my plans fail b/c I fail to think them through first often make up mind w/o considering the situation
Maternal Parenting Stress (.614)	being a parent is harder than I thought feel trapped by my parental responsibilities taking care of children is more work than pleasure often feel tired and worn out by raising a family

<sup>2</sup> Paternal self-control is a measure based on father reports collected at wave 2 (child aged one). This variable is constructed from reports of whether fathers (1) strongly agreed, (2) agreed, (3) disagreed, or (4) strongly disagreed with six questions asking about their impulsive behaviors. It is based on the Dickman impulsivity scale.

## Appendix D

Examples of Survey Questions (across waves) Used for Paternal Incarceration Composite Variable

### Indirect Reports of Paternal Incarceration\*

\*For each of the questions, “in jail,” “incarceration,” or “sent to jail” was one of a number of responses (depending on the question) fathers/mothers could have indicated.

#### On Father Surveys

Why weren't you looking for work?

Why did your romantic relationship with [*baby's mother*] end?

What are the reasons you and [*baby's mother*] are not living together (or married) now?

What are the reasons you and [*baby's mother*] are not planning to get married?

Thinking about (the last/that) separation, why were you and (*child*) separated?

What is your current housing situation?

#### On Mother Surveys

What was [*baby's father*] doing most of last week—working at a regular job, going to school, or something else?

Why did your romantic relationship with [*baby's father*] end?

What are the reasons you and [*baby's father*] are not living together (or married) now?

What are the reasons you and [*baby's father*] are not planning to get married?

Where does [*baby's father*] live most of the time?

Is [*baby's father*] currently working, in school, unemployed, or in jail or prison?

Has any action been taken by a welfare office, court, or judge to try to get [*baby's father*] to pay the child support he owes?

### Direct reports of Paternal Incarceration\*

\*These questions were first asked on the second wave of data collection, when the child was approximately one year old.

#### On Father Surveys

Have you ever spent time in a correctional institution, like a county jail, a state or federal prison, or a youth correctional institution like a training school or reform school?

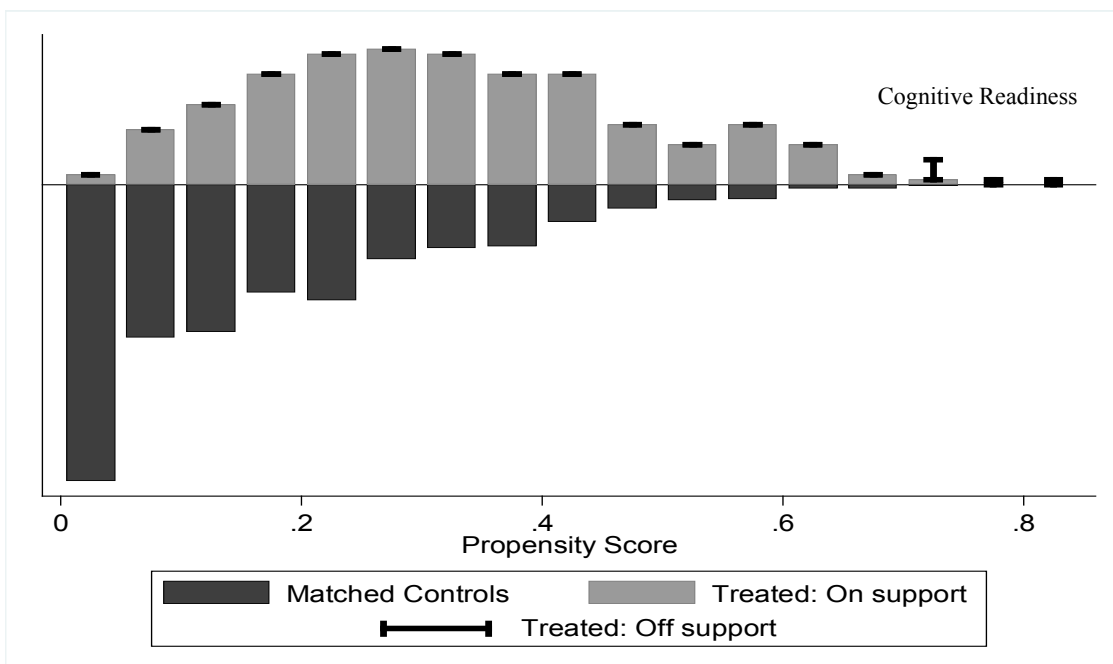
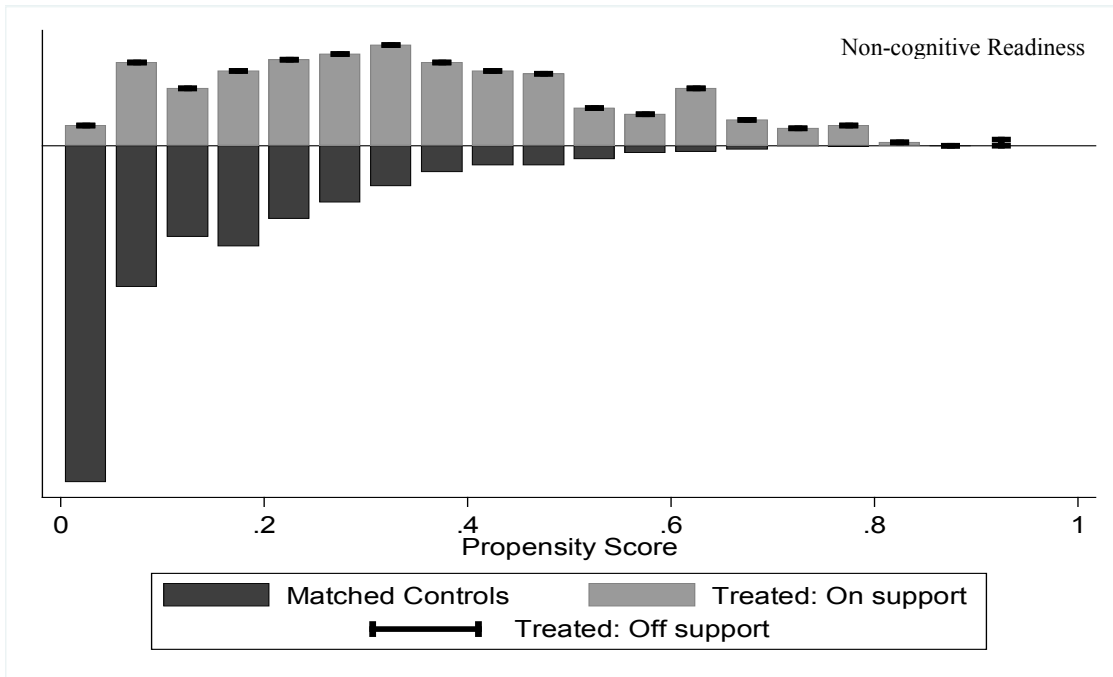
Did you spend any time in an adult correctional institution like a county, state, or federal jail or prison?

#### On Mother Surveys

Has [*baby's father*] (ever) spent any time in jail or prison?

### Appendix E

Figures showing the Distribution of Propensity Scores by Treatment and Region of Common Support for Non-cognitive and Cognitive Readiness



## Appendix F

### Covariate Balance Statistics for PSM Analyses

Sample	Mean Bias Before and After Matching				
	Overall	Black Boys	Black Girls	White Boys	White Girls
Before (raw)	25.2	14.7	18.5	35.5	34.0
After (matched)	4.4	4.3	3.7	9.5	11.7
% Reduction in Bias	82%	70%	81%	73%	65%

*Notes:* Covariate balance tests were done using the PSTEST command in Stata. See footnote 6 for more information.

## Appendix G

Results from OLS Regression Models Predicting School Readiness at Age Five

<b>Non-cognitive Readiness</b>				
Variable Names	Model 0	Model 1	Model 2	Model 3
	<i>Null</i>	<i>Full</i>	<i>Race*PI</i>	<i>Gender*PI</i>
<u>Paternal Incarceration</u>				
Before/By YR1	-0.325*** (0.04)	-0.168** (0.05)	-0.284* (0.10)	-0.143* (0.07)
Btw YR1 & YR5	-0.205*** (0.06)	-0.084 (0.07)	-0.142 (0.14)	0.081 (0.09)
Black*PI Before/By YR1			0.146 (0.11)	
Black*PI Btw YR1 & YR5			0.075 (0.16)	
Male*PI Before /By YR1				-0.047 (0.08)
Male*PI Btw YR1 & YR5				-0.312* (0.12)
Black (child)	-0.004 (0.04)	0.086 (0.07)	0.041 (0.07)	0.087 (0.06)
Male (child)	-0.136*** (0.04)	-0.128** (0.04)	-0.128** (0.04)	-0.074 (0.05)
Constant	0.266*** (0.04)	-0.91 (0.75)	-0.844 (0.75)	-0.929 (0.75)
<i>All OLS Controls Included</i>		x	x	X
	N=2602	N=2602	N=2602	N=2602

(cont.)



**Cognitive Readiness**

Variable Names	Model 0	Model 1	Model 2	Model 3
	<i>Null</i>	<i>Full</i>	<i>Race*PI</i>	<i>Gender*PI</i>
<u>Paternal Incarceration</u>				
Before/By YR1	-0.204*** (0.05)	0.001 (0.05)	0.009 (0.11)	0.039 (0.07)
Btw YR1 & YR5	-0.231*** (0.07)	-0.051 (0.06)	-0.168 (0.15)	-0.1 (0.09)
Black*PI Before/By YR1			-0.01 (0.12)	
Black*PI Btw YR1 & YR5			0.14 (0.16)	
Male*PI Before /By YR1				-0.075 (0.09)
Male*PI Btw YR1 & YR5				0.091 (0.13)
Black (child)	-0.736*** (0.05)	-0.375*** (0.07)	-0.389*** (0.09)	-0.373*** (0.07)
Male (child)	-0.208*** (0.04)	-0.202*** (0.04)	-0.202*** (0.04)	-0.188** (0.06)
Constant	0.868*** (0.05)	-0.567 (0.93)	-0.57 (0.93)	-0.593 (0.93)
<i>All OLS Controls Included</i>		X	x	x
	N=1709	N=1709	N=1709	N=1709

*Note:* Standardized results are reported with standard errors in parentheses. Analyses are unweighted and done on imputed data. Coefficients for included covariates not shown. Significance levels are the following: † p<0.1; \* p<.05; \*\* p<.01; \*\*\* p<.001 (two-sided tests).

## Appendix H

### Rosenbaum Bounds Sensitivity Analysis Results

Rosenbaum Bounds for Paternal Incarceration Treatment Effect on Non-cognitive School Readiness					
Overall		Black Boys		White Boys	
Gamma	p-critical	Gamma	p-critical	Gamma	p-critical
1	0.019	1	0.016	1	0.013
1.05	0.042	1.05	0.027	1.05	0.017
1.1	0.087	1.1	0.047	1.1	0.023
1.15		1.15	0.076	1.15	0.049
1.2		1.2		1.2	0.060

*Notes:* Results are based on sensitivity analysis done in Stata using the rbounds software package (DiPrete and Gangl 2004). P-values exceeding 0.10 have been omitted to demonstrate the point where the relationship becomes statistically insignificant.

## Appendix I

### Means, Standard Deviations, and Factor Loadings for Individual Items of Non-cognitive Readiness Scale by Paternal Incarceration Status

	Father Never Incarcerated		Father Incarcerated				Factor Loadings		
	Mean	SD	Before or by YR1		Btw YR1 & YR5		F1	F2	F3
			Mean	SD	Mean	SD			
(He/She) acts too young for age	0.12	(0.39)	0.12	(0.40)	0.14	(0.43)		0.339	0.526
(He/She) clings to adults or is too dependent	0.45	(0.66)	0.63	(0.74)	0.56	(0.73)		0.525	
(He/She) is nervous, high strung, or tense	0.13	(0.39)	0.19	(0.47)	0.18	(0.46)			0.421
(He/She) is too fearful or anxious	0.25	(0.49)	0.36	(0.59)	0.27	(0.50)			0.403
(He/She) is unhappy, sad, depressed	0.07	(0.28)	0.1	(0.31)	0.09	(0.31)		-0.332	0.682
(He/She) is withdrawn; (he/she) doesn't get involved with others	0.09	(0.34)	0.12	(0.37)	0.11	(0.33)			0.760
(He/She) is disobedient	0.48	(0.57)	0.55	(0.63)	0.5	(0.63)	0.558		
(He/ She) doesn't seem to feel guilty after misbehaving	0.38	(0.59)	0.48	(0.66)	0.47	(0.65)	0.310		
(He/She) is stubborn, sullen, or irritable	0.56	(0.63)	0.66	(0.68)	0.56	(0.66)	0.751		
(He/She) has temper tantrums or hot temper	0.5	(0.62)	0.61	(0.68)	0.59	(0.69)	0.800		
(He/She) cries a lot	0.31	(0.58)	0.43	(0.67)	0.41	(0.64)	0.322		
(He/She) doesn't get along with other children	0.16	(0.41)	0.22	(0.48)	0.17	(0.42)			0.432
(He/She) has trouble getting to sleep	0.28	(0.54)	0.33	(0.60)	0.3	(0.58)	0.298		
(He/She) has sudden changes in mood or feelings	0.42	(0.58)	0.57	(0.64)	0.54	(0.63)	0.620		
(He/She) can't concentrate, can't pay attention for long	0.43	(0.61)	0.53	(0.65)	0.48	(0.62)		0.795	
(He/She) can't sit still; (he/she) is restless or hyperactive	0.5	(0.68)	0.71	(0.77)	0.68	(0.73)		0.794	
(He/She) wants a lot of attention	0.98	(0.74)	1.13	(0.74)	1.16	(0.72)	0.360	0.383	

*Note:* Factor 1 aligns with externalizing behaviors, Factor 2 with attention-related skills, and Factor 3 with internalizing behaviors. The scale ranges from 0 to 2, with 0=not true, 1=somewhat true, and 2=very true.