

Title:

Mass Imprisonment and Racial Inequality in Childhood Mental Health

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Abstract

This paper describes how much mass imprisonment could have increased racial disparities in children's behavioral problems. In order to do so, I integrate results from two existing studies in a novel way. The first study uses contemporary, broadly representative surveys to estimate the effects of paternal incarceration on a range of child behavioral and mental health problems. Results suggest that having a father incarcerated has negative effects on children's behavioral and mental health problems. The second study estimates the risk of paternal imprisonment for black and white children born in 1978 and 1990. The paper presents findings showing that mass imprisonment may have increased black-white inequities in externalizing behaviors by 25 percent and internalizing behaviors by 45 percent.

Description of the Research Problem and Proposed Presentation

The November 2006 issue of *Criminology & Public Policy* included a special section on the topic of parental criminal justice involvement. The take-away message from that forum was that studies of the effects of parental incarceration on children suffered greatly from the lack of longitudinal data and the use of biased samples (Johnston, 2006). While the presence of criminally active or criminal justice-involved parents should matter for child outcomes for a host of theoretical reasons (Hagan & Dinovitzer, 1999; Hagan & Palloni, 1990), it has never been clear whether and to what extent criminal punishment of parents *causes* negative life outcomes for their children. Those drawn into prisons are 'disadvantaged' by any measure. The inmate population is replete with the under-employed, the under-educated, and those with various mental illnesses and learning disabilities—and this is to say nothing of their prior criminal activity. Even in the absence of incarceration, research on early childhood circumstances and adult attainment would predict less than ideal outcomes for the children of inmates (Wakefield & Uggen, 2010).

Thus, the difficulty associated with providing something resembling a causal estimate is a substantial obstacle to understanding the effects of mass imprisonment

on racial inequities among American children. Yet if we are interested in the macro-level consequences of large increases in the American imprisonment rate since the mid-1970s, we also need to know how many black and white children can expect to ever have a parent go to prison and how the disparities in these risks have changed over time. Research at the time of the publication of the November 2006 issue of *Criminology & Public Policy* could have told us little about these risks—other than that many more children experience parental incarceration today and that point-in-time estimates show substantial black-white inequities in this risk (Mumola, 2000).

That we knew roughly four years ago neither how having a parent go to prison influenced the outcomes of already-marginalized children nor what share of children could expect to ever have a parent imprisoned was troubling in large part because it meant that we had only a vague idea of what the consequences of mass imprisonment for future inequality would be. There was research showing that the lifetime risk of imprisonment for adult men was increasingly unequally distributed (Pettit & Western, 2004) and that these inequities had substantial implications for racial and class inequities among adult men in the labor market (Pager, 2003; Western, 2002) and family structure (Lopoo & Western, 2005). But we had very little sense of how these inequities would play out in the next generation.

A lot can happen in four years. Although obstacles to identifying a causal relationship between parental incarceration and child outcomes persist (Guo, Roettger, & Cai, 2008), researchers have made great strides in identifying how having a parent go to prison influences child outcomes (Murray & Farrington, 2008; Wakefield & Uggen, 2010; Western & Wildeman, 2009). In line with what most

researchers had suspected, having a parent go to prison exacerbates pre-existing behavioral problems (and other poor outcomes) among children. New estimates of the risk of paternal imprisonment also emerged. These estimates show that the risk of paternal imprisonment for black children is large and has grown tremendously between the 1978 and 1990 birth cohorts. Results also imply that the risk of paternal imprisonment for white children remains modest (Roettger & Swisher, 2009; Wildeman, 2009).

This paper presents results from a larger collaborative project (Wakefield and Wildeman 2010) on the influence of mass incarceration on the intergenerational transmission of racial inequality. Using prior estimates of the effects of parental incarceration on children at the individual-level (Wakefield 2007) and demographic estimates of the racial disparity in the likelihood of experiencing parental incarceration (Wildeman 2008), the presentation will provide an estimate of the influence of mass incarceration on racial gaps in childhood mental health.

Data Sources, Measures, and Analytic Strategy

Data Sources

For analyses of individual-level outcomes, I use longitudinal survey data from the Project on Human Development in Chicago Neighborhoods (hereafter PHDCN) (Earls, Brooks-Gunn, Raudenbush, & Sampson, 2002) and the Fragile Families and Child Well-Being Study (hereafter FFCW) (Reichman, Teitler, Garfinkel, & McLanahan, 2001). The PHDCN and the FFCW are longitudinal surveys of young children, adolescents, and their primary caregivers (in most cases, mothers). The

PHDCN followed roughly 6,000 randomly selected children, adolescents, and young adults in Chicago, IL over three waves of data collection from 1994 to 2002. The FFCW followed roughly 5,000 children born between 1998 and 2000 in 20 cities with populations in excess of 200,000—the majority of whom were born to unmarried parents. Initial interviews for the FFCW study were conducted with mothers in hospitals shortly after they gave birth. Mothers were interviewed again about 12, 36, and 60 months later. (Nine year data collection is underway.)

The central challenge of the micro-level analysis is that assignment into prison is non-random. Entry into prison is predicted by all sorts of things (age, race, income, employment status, low self-control, broken or weak social bonds, and so on), most of which are likely causally related to behavioral problems for children. The analysis proceeds by prioritizing repeated measures of the independent and dependent variables and subjecting the analyses to successively more restrictive models. In analyses presented here, I begin with propensity score models, which offer one method for estimating the relationship between paternal incarceration and children’s mental health and behavioral problems. The results from the propensity score models are substantively similar to results from various other modeling strategies. (See Table A2 for robustness checks using PHDCN data). As a result, the analysis to follow represents the most stringent tests of paternal incarceration effects to date.

After presenting estimates of the effects of paternal incarceration on children’s behavioral and mental health problems, I then combine them with demographic estimates of the risk of paternal imprisonment (Wildeman, 2009) in

order to describe the effects of mass imprisonment on racial inequities in childhood behavioral and mental health problems. In choosing point estimates of the effects of paternal incarceration on children's total, externalizing, and internalizing behaviors, I opted for the mean of the high and low estimates shown in Table A2. As a close inspection of Table A2 indicates, this strategy provides one method for averaging the effects across the model space shown in Table A2. Relying on other point estimates led to somewhat larger and smaller effects on racial inequities in child behavioral and mental health problems. Nonetheless, the tenor of results remained consistent regardless of the estimate utilized. Simply put, the effects of mass imprisonment on racial inequities in child behavioral and mental health problems are too large to ignore, regardless of which point estimates was used.

Empirical Results

Does Paternal Incarceration Cause Harm?

It should come as little surprise that children of incarcerated parents were worse off (on a number of dimensions) than their similarly situated peers who had no parent incarcerated, even before experiencing the event (see Wakefield [2007] for more descriptive detail). That incarceration draws primarily from the disadvantaged segments of the population is well-known and the children of the incarcerated experience a host of deficits (and would even in the absence of contact with the criminal justice system). After paternal incarceration, the gap between the children of the incarcerated widens, with those experiencing paternal incarceration far worse off than their disadvantaged peers. Nonetheless, this yields little insight into

whether having a father incarcerated actually causes any of those observed differences. In fact, just based on descriptive statistics, it might be just as reasonable to assume that paternal incarceration *decreases* gaps in child behavioral and mental health problems by enhancing child wellbeing.

In Figure 1, I present estimates based on propensity score models using data from the PHDCN (Wakefield, 2007). The PHDCN results reflect older children and adolescents of both sexes (8-16). Across all age groups, the effect of father incarceration is in the direction of increasing aggression and externalizing problems. The effects of father incarceration appear to be global, increasing both externalizing problems (such as aggression or delinquency) as well as internalizing problems (such as social withdrawal or somatic complaints). While young boys are especially prone to aggression following the incarceration of a father (Wildeman, *Forthcoming*) and adolescent girls are more likely to exhibit internalizing problems (Wakefield, 2007), across all models and data sources the effects of father incarceration are in the direction of increasing mental health and behavioral problems. Paternal incarceration results in about one-third to one-half standard deviation increase in difficulties across all of the mental health and behavioral problems considered. It is also worth noting that differences shown here were statistically significant (at the .05 level or better) in all cases.

[Figure 1 about here.]

Results shown in Figure 1 indicate that paternal incarceration worsens wellbeing across all outcomes, but what is the magnitude of the problem? Figure 2 presents the effects of father incarceration in terms of the percentage change in

scores on the CBCL and its subsections across various modeling specifications among children in the PHDCN. The most conservative estimates show that father incarceration is harmful for children, across a variety of measures of wellbeing. The magnitude of the effects, however, is relatively small once preexisting disadvantages are taken into account. Using the smallest effect sizes across all models, father incarceration results in about a 4 percent increase in mental health and behavioral problems. The most stringent models, however, likely underestimate the true causal effect of paternal incarceration (by “over-controlling” for changes in family life, paternal behaviors, and income that might have been caused by incarceration), so it is also worth noting that the largest effect sizes suggest about a 6 percent increase in mental health and behavioral problems. Moreover, while fixed effects models cannot address unobserved change that may predict behavioral problems and propensity score models cannot account for unobserved heterogeneity, the robustness of the results across analytic strategies is reassuring. Finally, given the similarity of the observed effects across data sources and age of children, the analyses strongly show that paternal incarceration has meaningful negative effects on children.

[Figure 2 about here]

While relatively small, these effects are not inconsequential. Moreover, when considering the relative importance of mental health and behavioral problems that result from paternal incarceration, it is useful to recall that children of incarcerated parents were typically having difficulty prior to their parent’s incarceration. Father incarceration has the effect of furthering burdening already vulnerable children; for some, the increase in mental health problems as a result of paternal incarceration

reaches clinical levels. For example, in an analysis of the Child Behavior Checklist in the general population of children and adolescents, Achenbach and colleagues (1991) find that 18 percent of all children were in need of medical or therapeutic intervention based on their internalizing problem behavior scores. In the PHDCN sample, about 50 percent of the children who had a father incarcerated had internalizing problem scores that suggested intervention might be needed and more than a third of children with a father incarcerated had CBCL scores at or above the clinical level. Because CBCL scores are highly predictive of future life outcomes, both the increase in problems and the starting point for children of incarcerated parents are important. Paternal incarceration therefore burdens children who already have significant problems; as a result, a 4 to 6 percent increase in the CBCL renders these problems clinically significant for many children of incarcerated parents.

Who Does Paternal Incarceration Harm?

The above analysis demonstrates substantial and statistically significant harmful effects of paternal incarceration on children. The costs to childhood mental health and behavioral problems are experienced by the already disadvantaged and are comparable to other research findings on mass incarceration (Manza & Uggen, 2006; Massoglia, 2008; Western, 2002, 2006). I next investigate the meaning of these results in light of well-documented racial disparities in the risks of paternal imprisonment. Figure 3 compares the risk of paternal imprisonment by age 14 for black and white children born in 1978 relative to those born just 12 years later in 1990 (Wildeman, 2009). Although the analysis on which this figure is based focuses

not just on racial disparities in the risk of paternal imprisonment but also class disparities in that risk, I choose to focus just on racial disparities because these estimates better fit our interest in the macro-level effects of mass imprisonment on racial inequities in childhood behavioral and mental health problems.

Results from Figure 3 show stark racial disparities in the risk of paternal imprisonment. According to these results, black children born in 1990 had a 25.1 percent risk of having their father imprisoned. This figure is staggering when compared to the risk for white children born in that same year. For those children, the risk of paternal imprisonment was just 3.6 percent. Thus, dramatic increases in the risk of paternal imprisonment have been heavily concentrated among black children, suggesting that mass imprisonment may have substantial implications for racial inequities in childhood behavioral and mental health problems.

[Figure 3 about here]

How Much Does It Matter for Racial Inequities in Childhood?

For mass imprisonment to have substantial consequences for racial inequities in children's behavioral and mental health problems, it must be (1) increasingly common, (2) unequally distributed by race and (3) have negative effects. Yet it must also have either similar effects for white and black children or more negative effects on black children relative to white children to substantially cause racial inequities in childhood. In analyses (not presented here but available from author), I tested to see if the effects of paternal incarceration on children's behavioral problems differ by race. In no case were the paternal incarceration-race interactions significant, and

they were more often in the direction of larger effects for black children than white children. In light of these findings, I feel comfortable assuming uniform effects for black and white children—at least for these outcomes—in this stage of the analysis.

Figures 4 and 5 provide insight into how much the prison boom may have influenced racial inequities in child behavioral and mental health problems. Figure 4 shows, maybe most importantly, that racial inequities in these behavioral problems would likely be substantial even absent mass imprisonment.¹ This is important to note since it suggests that programs that seek to diminish racial disparities in these problems should not focus solely on the penal system. Nonetheless, increases in the risk of paternal imprisonment have taken their toll on black children in discernible ways. According to the estimates presented here, the disparities between black and white children in behavioral problems are much larger as a result of the huge increase in the risk of paternal imprisonment than they would have been otherwise.

[Figures 4 and 5 about here]

As Figure 5 further demonstrates, racial differences in total, externalizing, and internalizing behavioral problems all would have been substantially smaller absent increases in the risk of paternal imprisonment. Effects on externalizing and internalizing behavioral problems are especially pronounced. According to our estimates, black-white disparities in internalizing behavioral problems would have been about 46 percent lower had the prison boom not taken place; black-white gaps in externalizing behaviors would have been about 25 percent smaller. These

¹ I generated estimates of racial disparities in these problems by using the estimated differences between black and white children whose parents had never been incarcerated in the PHDCN data. (See Wakefield [2007] for more information.)

substantial effects suggest that mass imprisonment is almost certain to increase racial (and likely class) inequities for many years to come.

Discussion and Public Policy Implications

The rapid ascent of the incarceration rate in the United States since the early 1970s has garnered significant research attention. For much of the 20th century, the incarceration rate was consistently about 100 inmates per 100,000; today, it is 754 inmates per 100,000 and almost three percent of the population is under correctional supervision in some form (Glaze & Bonczar, 2009; Sabol, West, & Cooper, 2009). Over the past 15 years, a burgeoning research literature has defined the scope (Blumstein & Beck, 1999), causes (Beckett, 1997; Garland, 2000; Greenberg & West, 2001), and consequences (Wakefield and Uggen 2010; Western 2006) of mass incarceration. Among these, former inmates experience deficits in employment (Pager, 2003), earnings (Western, 2006), family formation (Comfort, 2007, 2008; Lopoo & Western, 2005), and civic engagement (Manza & Uggen, 2006). Finally, racial disproportionality in incarceration is well-documented (Pettit & Western, 2004). The analysis presented here expands these findings to include effects on an often-neglected group: the children of incarcerated parents. They suggest that the problems associated with mass incarceration extend far beyond those observed for individual inmates and are unlikely to abate soon because of their intergenerational and long-term influence, even if incarceration were scaled back to 1970s levels.

While the sheer size of the correctional population draws substantial public attention (Pew, 2008), the most significant costs of mass incarceration depend on the social connections of inmates to the labor market, to their communities, and to their families. Because most inmates are parents (Mumola, 2000), the influence of criminal punishment on children is an important area of study. The overall effect of paternal incarceration on children is harmful and that these effects are disproportionately borne by children who are already disadvantaged. Children of incarcerated parents were not doing well prior to the imprisonment of their father and they are worse off as a result of it. Moreover, these harms are likely to include a number of other domains of adjustment (for example, school success, occupational attainment, or family formation) because childhood mental health and behavioral problems tend to accumulate and spread over time.

While the estimates regarding behavioral problems generally should attract the attention of policy makers, the racial disparity in these effects is potentially more important (and also the effect of mass incarceration that remains least understood by the general public). Using conservative estimates and a variety of very stringent modeling strategies, the influence of mass incarceration has increased racial disparities in externalizing problems by 25 percent and internalizing problems by 46 percent. Even if these estimates are inflated to some degree, they remain an important and consequential facet of the mass incarceration era; more importantly, given the size of these estimates, they are likely to influence a host of significant social outcomes for years to come.

The results regarding racial disparities are large, disconcerting and consequential and yet paternal incarceration is just one facet of the influence of the prison boom on children. Incarceration is heavily concentrated and its influence extends beyond far beyond parents to whole families and neighborhoods. As a result, while the estimates are large, they are almost certainly an *underestimate* of the effect of mass incarceration on children and inequality. Figure 6 compares black and white children with respect to the number of family members who have ever been incarcerated. Black children are much more likely to experience the incarceration of multiple family members; for example, just 3 percent of White children have had 3 or more family members incarcerated relative to more than 16 percent of Black children. Though much of the current research (including that presented here) is focused on racial differences with respect to father incarceration, the concentration of incarceration in the most disadvantaged families and communities (Clear, 2007; Sampson & Loeffler, 2010) is likely to affect childhood wellbeing for the children of the incarcerated but also for all marginalized children.

[Figure 6 about here]

Taken together, the analysis coupled with those on other effects of the prison boom show that incarceration is less efficient and more costly than previously realized. Research detailing the costs of mass incarceration coincides with growing public discussion about the use of imprisonment in the United States. The Great Recession, for example, has exacerbated pre-existing capacity and budgetary constraints in many states and several cost-saving initiatives target punishment policy. California, a state with a crushing budgetary crisis and high unemployment

as well as incarceration rates, recently shifted to non-revocable parole for non-violent offenders to reduce returns to prison as a result of technical violations (and the attendant 'churning' from prison to home that prior monitoring systems encouraged). In another example, sentencing disparities for crack vs. cocaine possession in federal sentencing guidelines were recently reduced largely as a cost-saving measure. This change is expected to reduce overall prison populations as well as racial disparities in punishment. While public discussion of incarceration is focused on its direct costs, the results presented here add to growing concerns about the prison boom by rendering visible its substantial indirect costs.

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Appendix A. Descriptive Statistics and Model Comparisons

Table A1: Wave 1 and 2 Descriptive Statistics for Cohorts 6-15 (PHDCN)

Variables	N	Mean/Percent (St. Dev.)
Age		
Biological Mom at Wave 1	3,089	35.89 (6.65)
Biological Dad at Wave 1	3,646	39.12 (7.95)
Subject Child at Wave 2	3,324	10.27 (3.36)
Race of Child		
White	475	14.32
Black	1,165	35.13
Hispanic	1,547	46.65
Other Race	129	3.73
Gender of Child		
Male	1,660	49.94
Female	1,664	50.06
Education of Biological Mother at Wave 1		
Less Than High School	1,427	45.27
HS Diploma	432	13.71
Some College	1,028	32.61
College Degree or More	265	8.41
Education of Biological Father at Wave 1		
Less Than High School	1,335	46.92
HS Diploma	535	18.80
Some College	692	24.32
College Degree or More	283	9.95
Employment of Primary Caregiver at Wave 2		
Employed (FT/PT)	1,886	89.85
Unemployed	213	10.15
Household Income at Wave 2		
Less than 5,000	292	10.20
5,000-9,999	310	10.83
10,000-19,999	576	20.12
20,000-29,999	550	19.21
30,000-39,999	398	13.90
40,000-49,999	269	9.40
50,000 or more	468	16.35
Per Capita Income	3,078	6,131 (5,084)
Biological Parents Divorced Since Wave 1	67	2.02
PC is Biological Mom or Dad	3,045	92.41
Paternal Incarceration		
Father Currently in Jail	64	1.97
Father Incarcerated Since W1	73	2.79
Father Incarcerated Since W2	60	2.36
Father Incarceration W1-W3*	174	5.23

Note: A small number of fathers were incarcerated multiple times throughout the data series

Table A2: Comparison of Paternal Incarceration Effects Across Models Types (PHDCN)

CBCL Scales	1: OLS Bivariate Model	2: Full OLS Model	3: Lagged Dependent Variable Models	4: DID Models	5: Average Treatment Effect on the Treated (Becker and Ichino)
Internalizing Problems					
Withdrawn	.90** (.35)	1.16*** (.36)	1.40*** (.31)	1.58*** (.48)	.94* (.58)
Somatic Complaints	.87** (.29)	1.02*** (.30)	.83** (.28)	.59# (.39)	.92** (.35)
Anxiety/Depression	1.05* (.54)	1.47** (.57)	1.30*** (.48)	1.20# (.79)	1.03# (.81)
Total Internal	.2.64** (.96)	3.44*** (1.00)	3.29*** (.84)	3.21** (1.31)	2.69* (1.70)
Externalizing Problems					
Aggression	2.69*** (.64)	2.75*** (.68)	1.66** (.52)	1.32# (.88)	2.08** (.87)
Delinquency	.79 (.25)	.69** (.27)	.41 (.23)	.16 (.36)	.52* (.29)
Total External	3.49*** (.83)	3.44*** (.88)	1.97** (.67)	1.47# (1.16)	2.60** (.98)
Total Problems					
Total	7.26*** (2.10)	8.24*** (2.21)	5.85*** (1.72)	4.86* (2.93)	6.04* (3.07)

Notes: ***p<.001, **p<.01, *p<.05, #p<.10; All models include controls for child race and gender, parental education and employment, household income, parental criminal history, baseline CBCL score, and relationship to primary caregiver.

Figure 1. Propensity Score Model Estimates of Paternal Incarceration Effects

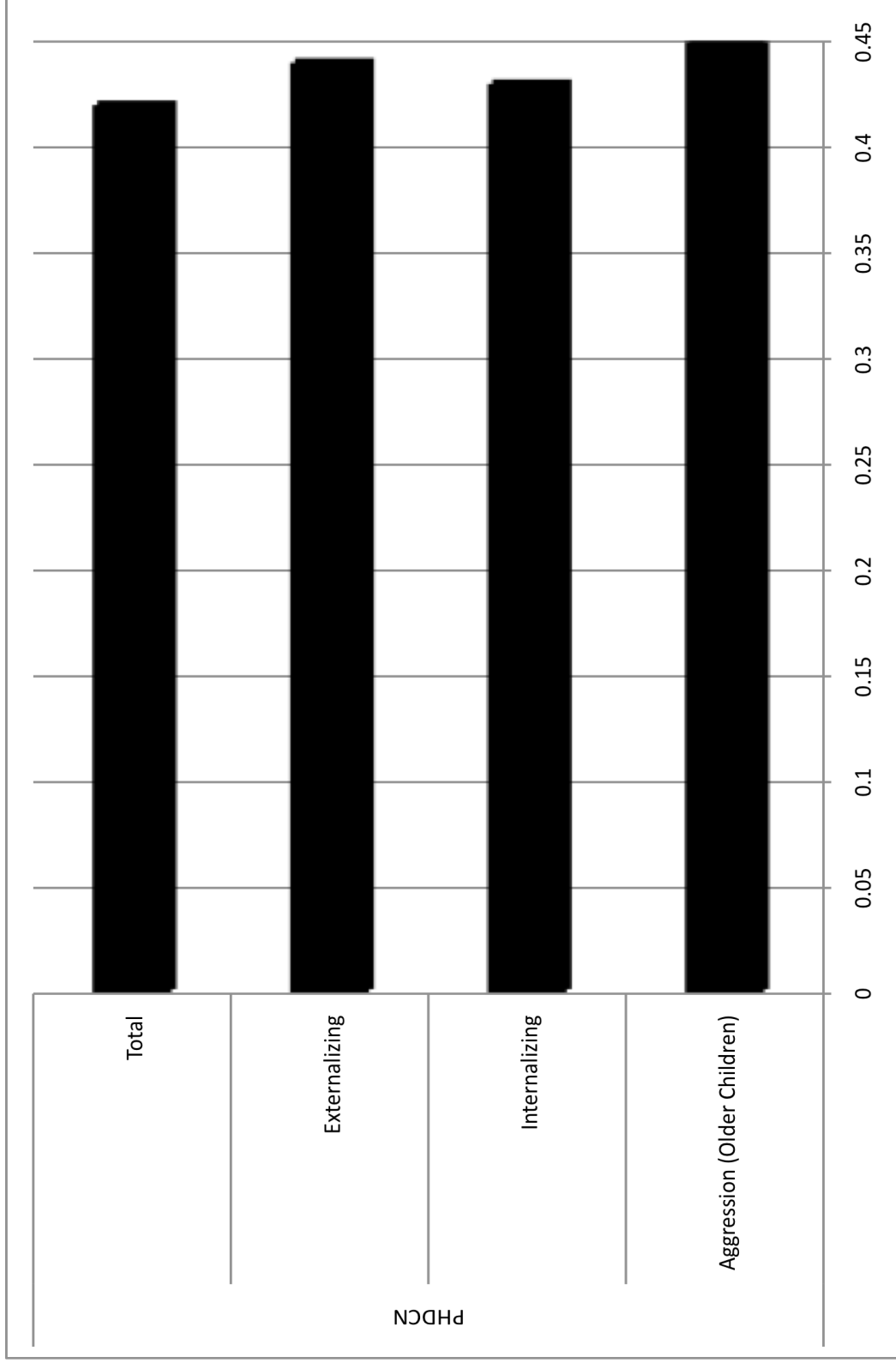


Figure 2. Percentage Change in CBCL Scores Across Modeling Strategies

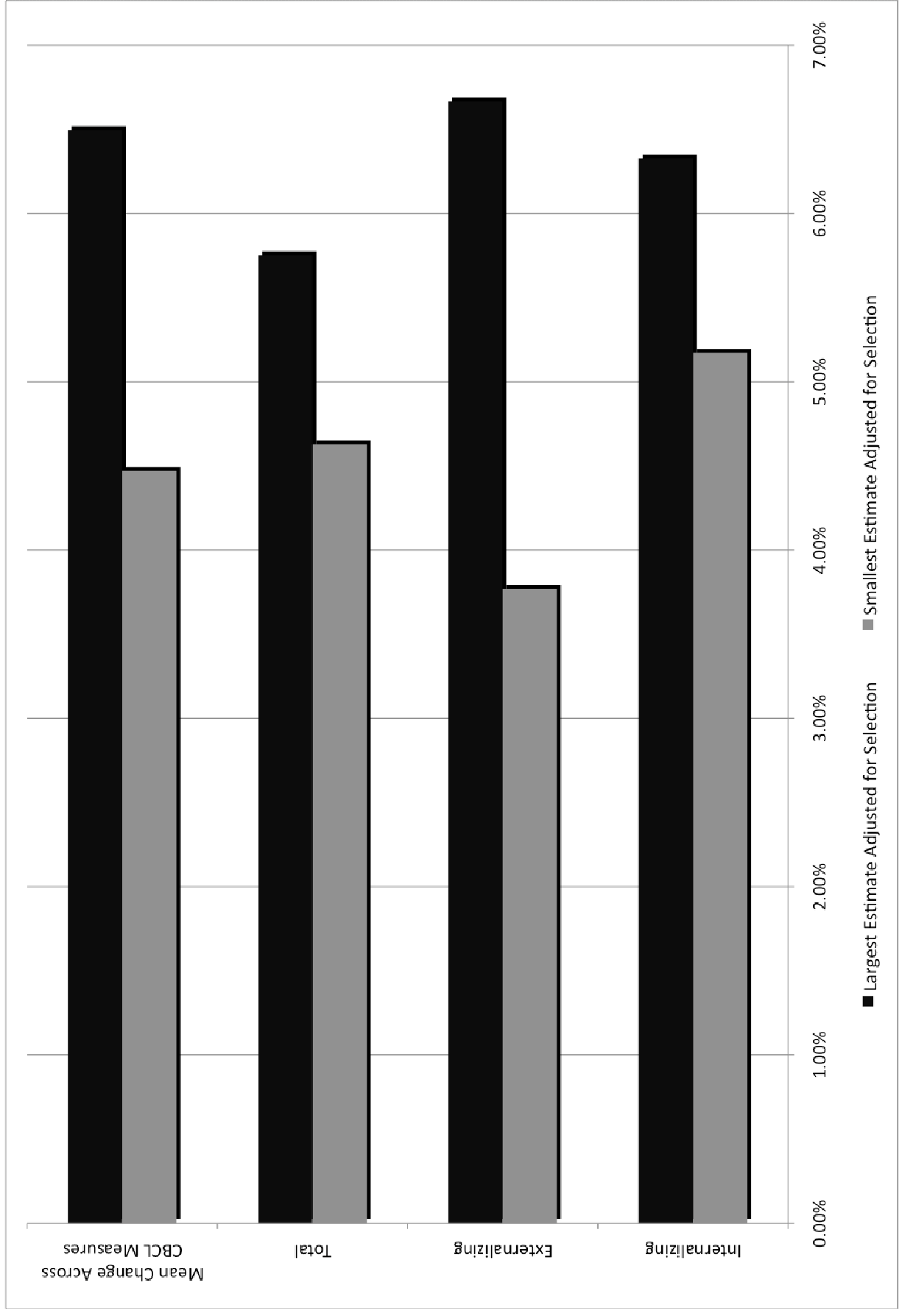


Figure 3. Racial Disparities in the Risk of Paternal Imprisonment By Age 14 for the 1978 and 1990 Birth Cohorts

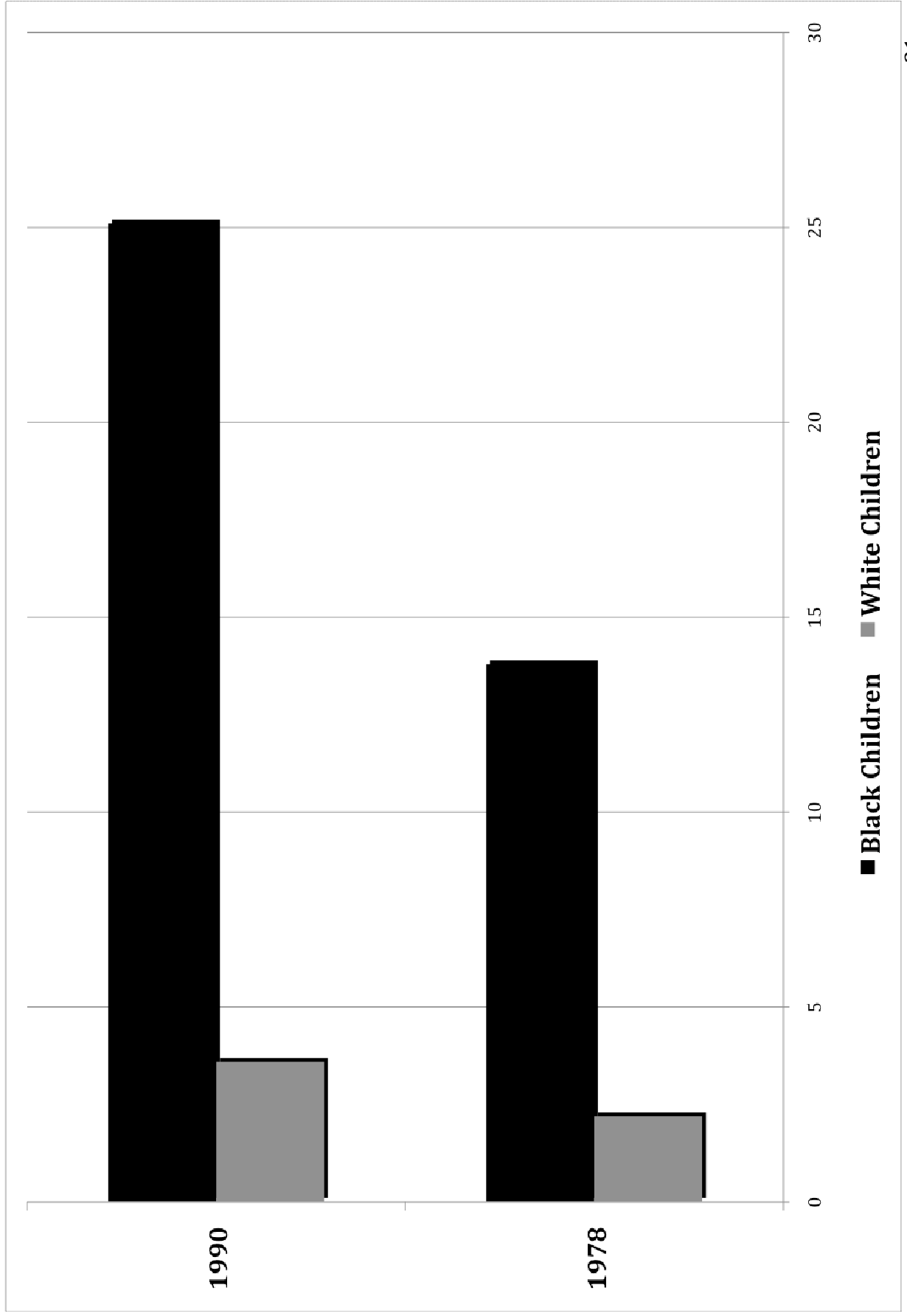


Figure 4. Growth in the Racial Disparity of Childhood Well Being by Changing Levels of Incarceration

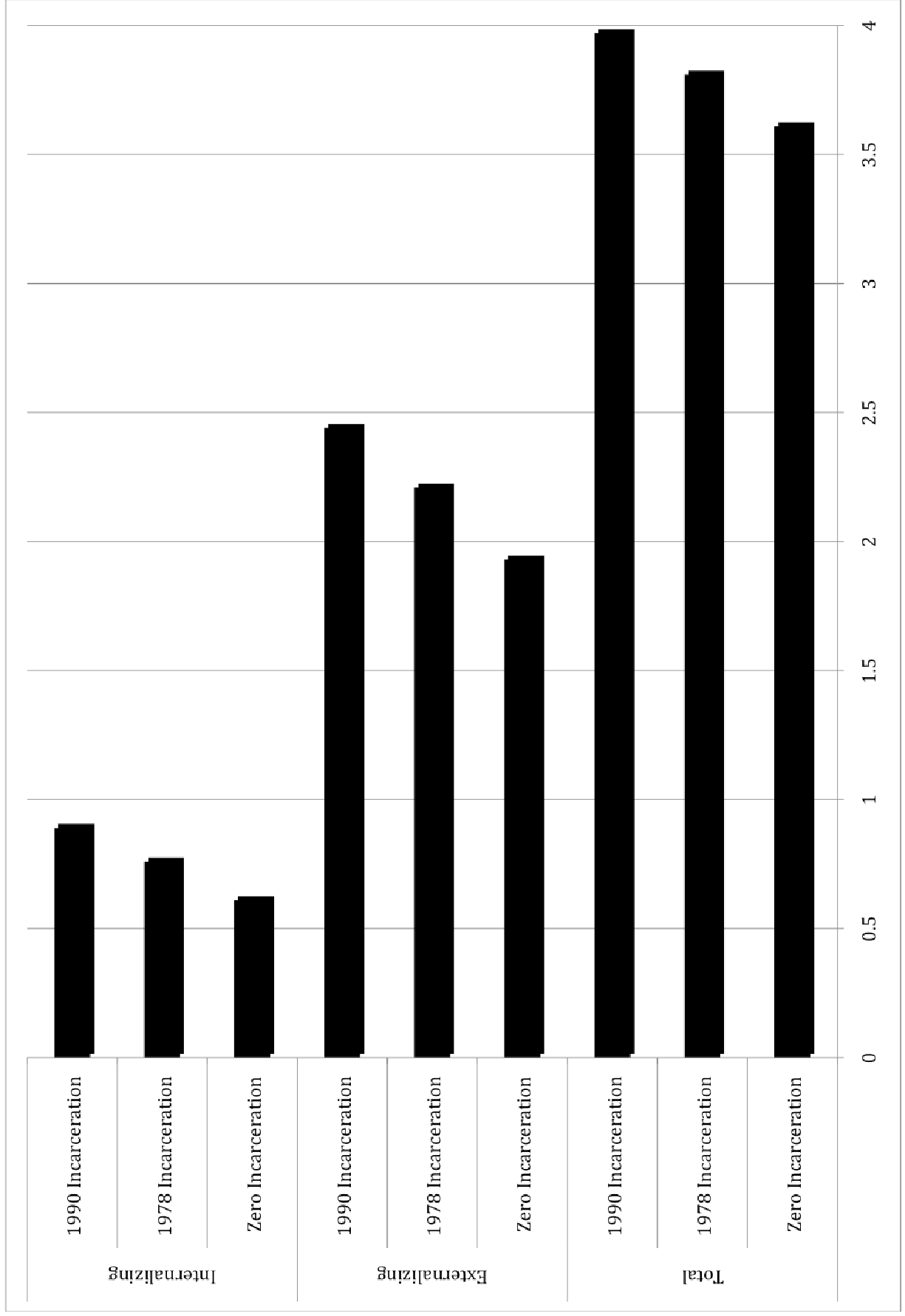


Figure 5. Relative Shifts in Racial Disparities in Childhood Well Being by Levels of Incarceration (PHDCN)

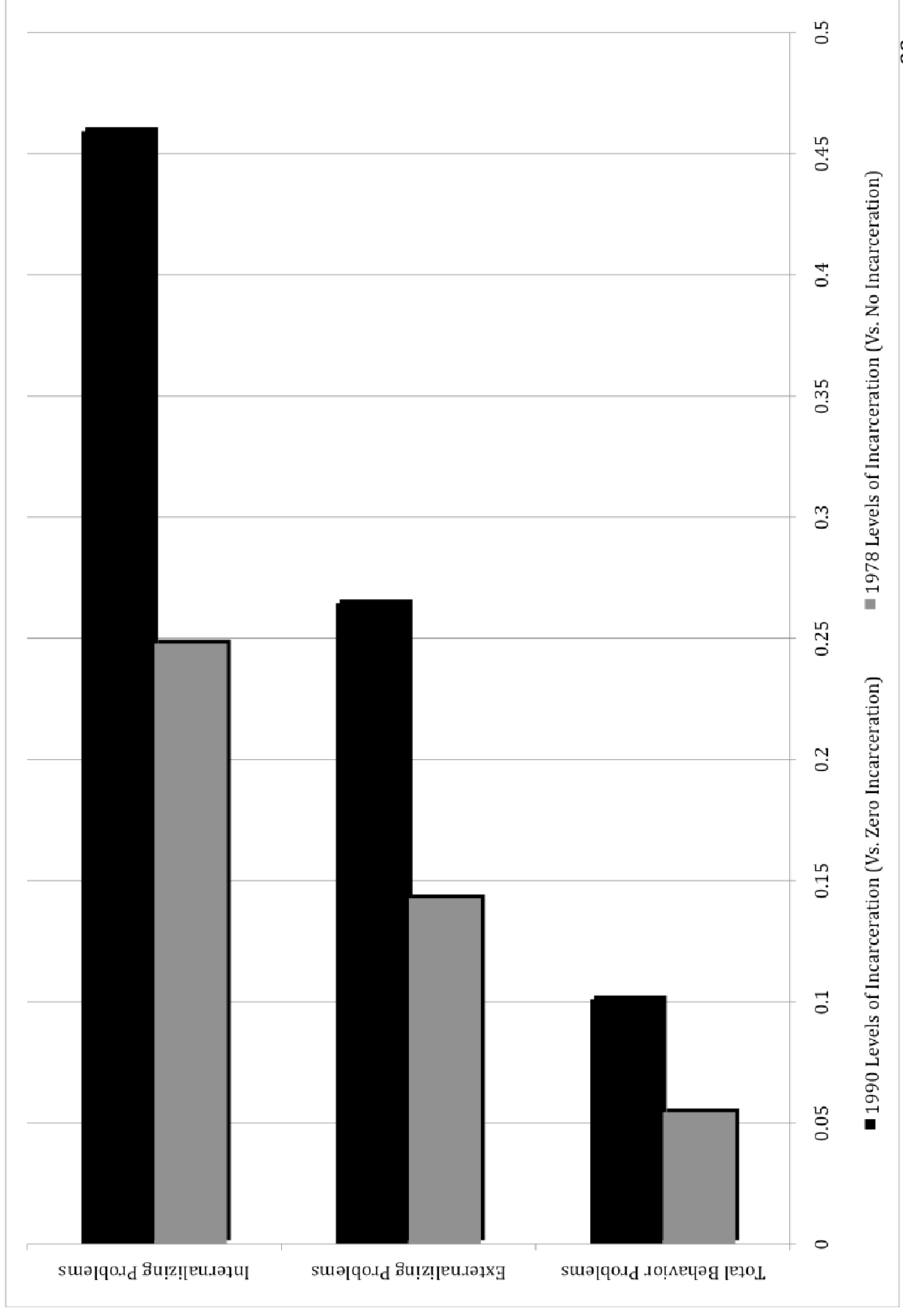


Figure 6. Racial Disparities in the Concentration of Incarceration in Families (PHDCN)

