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# Exposure to Childhood Poverty and Racial Differences in Economic Opportunity in Young Adulthood

# Zachary Parolin, Jordan Matsudaira, Jane Waldfogel, and Christopher Wimer

**ABSTRACT** Young adults in the United States, especially young Black adults, experience high poverty rates relative to other age groups. Prior research has largely attributed racial disparities in young adult poverty to differential attainment of benchmarks related to education, employment, and family formation. This study investigates that mechanism alongside racial differences in childhood poverty exposure. Analyses of Panel Study of Income Dynamics data reveal that racial differences in childhood poverty are more consequential than differential attainment of education, employment, and family formation benchmarks in shaping racial differences in young adult poverty. Whereas benchmark attainment reduces an individual's likelihood of poverty, racial differences in benchmark attainment do not meaningfully explain Black-White poverty gaps for three reasons. First, childhood poverty is negatively associated with benchmark attainment, generating strong selection effects into the behavioral characteristics associated with lower poverty. Second, benchmark attainment does not equalize poverty rates among Black and White men. Third, Black children experience four times the poverty rate of White children, and childhood poverty has lingering negative consequences for young adult poverty. Although equalizing benchmark attainment would reduce Black-White gaps in young adult poverty, equalizing childhood poverty exposure would have twice the reduction effect.

**KEYWORDS** Poverty • Racial inequality • Intergenerational mobility • Social policy • Demography

#### Introduction

Young adults in the United States experience high poverty rates compared with other age groups (Wimer et al. 2020a). Among young adults, Black men and women face particularly high poverty rates. Research focused on individual and behavioral determinants of poverty has sought to understand how racial differences in the attainment of "benchmarks" related to the completion of high school, full-time employment, and delaying childbirth until marriage affect poverty in adulthood and the extent to which these differences affect racial differences in poverty (Eggebeen and Lichter 1991;

Haskins and Sawhill 2009; Iceland 2019; Thiede et al. 2017; Wilcox and Wang 2017). Other research has explored how childhood poverty shapes adulthood socioeconomic disadvantage (Corcoran 1995; Duncan et al. 1998; Haveman et al. 1991; Mayer 1997; McLoyd 1990). This study incorporates components of both strands of literature, investigating how racial differences in childhood poverty exposure and benchmark attainment affect racial differences in young adult poverty.

We posit that achieving all three benchmarks strongly reduces the likelihood of poverty among young adults but that racial differences in benchmark attainment are less consequential than racial differences in childhood poverty exposure for explaining Black—White differences in young adult poverty. We test our hypothesis with three connected analyses. First, we investigate the extent to which childhood poverty exposure influences attainment of the education, employment, and family formation benchmarks. We anticipate large selection effects such that differential childhood poverty exposure will help to explain racial differences in benchmark attainment among young adults. Second, we investigate the extent to which benchmark attainment equalizes racial differences in young adult poverty, anticipating that racial gaps in poverty will persist even among those who meet all benchmarks. Third, we investigate how childhood poverty exposure influences young adult poverty, independent of benchmark attainment. We anticipate that the lingering negative consequences of childhood poverty are more consequential than benchmark attainment for young adult poverty status.

Our analyses use data from the Panel Study of Income Dynamics (PSID), which provides detailed information on income, demographics, employment, and family characteristics throughout respondents' lives. The PSID is uniquely suited to measure poverty outcomes in the first 10 years of a child's life, as well as poverty outcomes among these respondents in young adulthood (approximately ages 25–30). We investigate how the association between childhood poverty and young adult poverty varies for Black men relative to White men and for Black women relative to White women.

Our findings offer several contributions to research on the intergenerational transmission of poverty and racial differences in young adult poverty. Despite a large and growing literature on individual and behavioral determinants of poverty (Iceland 2019; Wilcox and Wang 2017), we find that differential exposure to poverty during childhood is more consequential than education, employment, and family structure benchmarks in shaping racial differences in young adult poverty.

First, we find that young Black adults who turned 30 in recent decades experienced childhood poverty at four times the rate of young White adults. Moreover, our findings suggest that childhood poverty exposure is strongly and negatively associated with the likelihood that young adults complete high school, achieve full-time employment, or delay childbearing until after marriage (Duncan et al. 2010; Haveman et al. 1991; Musick and Mare 2006). The racial differences in childhood poverty exposure largely explain racial differences in benchmark attainment in young adulthood.

Second, we find that even among young adults who achieve all three benchmarks, the poverty rate of young Black men is three times that of young White men. Moreover, the poverty rate difference between Black young adults who *do* achieve all three benchmarks and White young adults who *do not* is not statistically significant. Although benchmark attainment reduces poverty levels for all demographic groups observed, it remains insufficient to close racial gaps in young adult poverty among men.

Third, we find that in addition to shaping the likelihood of benchmark attainment, childhood poverty is strongly and directly associated with young adult poverty, independent of the benchmarks. The poverty-increasing effect of spending birth through age 10 in poverty is larger than the poverty-reduction effect of completing high school, maintaining full-time employment, and postponing childbirth until after marriage.

In a counterfactual scenario in which Black men's and women's benchmark attainment rates or childhood poverty rates match White men's and women's, we find that poverty levels for young Black adults, as well as racial gaps relative to young White adults, decline more when childhood poverty rates are equalized. Equalizing childhood poverty exposure has twice the effect of equalizing benchmark attainment in reducing Black—White gaps in young adult poverty.

#### Poverty in Young Adulthood

Poverty is an indicator of whether a family unit has a sufficient level of resources to meet basic needs (Atkinson 2019; Citro and Michael 1995; Townsend 1979). An individual's likelihood of experiencing poverty varies across the life course. For example, poverty rates in the United States tend to be higher for young children than for older children (Pac et al. 2017). By contrast, individuals older than 30 tend to have lower poverty rates than younger adults. In recent years, the age group facing the highest poverty rate in the United States is 18- to 30-year-olds, particularly 18- to 24-year-olds (Wimer et al. 2020a).<sup>1</sup>

Perspectives on the sources of poverty tend to contrast the role of individual and behavioral factors with broader contextual factors, such as tax and transfer programs or childhood socioeconomic environment (Brady 2019; Darity 2003). Individual and behavioral factors include demographic and employment characteristics of adults that increase (or decrease) their likelihood of poverty. For example, single parenthood, the lack of a high school diploma, nonemployment, part-time work, and young age at parenthood each contribute to a higher likelihood of poverty (National Academy of Sciences 2019). Moreover, racial differences in the prevalence of these characteristics may help explain racial differences in poverty (Baker et al. 2022; Iceland 2019).

Particularly within the life course literature, studies have focused on the association between meeting certain benchmarks in young adulthood and economic success in one's late 20s or early 30s (Furstenberg 2010). Studies on the Success Sequence, for example, have found very low poverty rates among individuals in their early 30s who attained the following benchmarks in young adulthood (in the order listed): (1) earned a high school diploma or GED; (2) worked, studied, or cared for a child (born in wedlock) full-time; and (3) did not have out-of-wedlock children (Haskins and Sawhill 2009; Wilcox and Wang 2017). Many other scholars have identified the importance of education, employment, and family structure in influencing poverty,

<sup>&</sup>lt;sup>1</sup> In 2019, the poverty rate among 18- to 30-year-olds was 14.1%, compared with 12.4% for children, 10% for adults aged 30-64, and 12.8% for adults aged 65 or older. These estimations are the authors' calculations from the 2020 Current Population Survey (reference year 2019) using the Supplemental Poverty Measure.

particularly in explaining racial differences in poverty (Bitler et al. 2017; DeNavas-Walt and Proctor 2015; Fox et al. 2014; Hoynes et al. 2006; Smeeding et al. 2001).

In contrast, studies focused on the contextual influences of poverty tend to investigate structural or institutional determinants of poverty, such as the role of the welfare state and labor market institutions, systemic racism and sexism, or parental resources during childhood (Darity et al. 2012). Particularly in the life course literature, scholars have demonstrated that family income during childhood strongly predicts an individual's later-life income (e.g., Bloome 2015; Chetty et al. 2014; Corak 2013; Mitnik et al. 2015; Pfeffer and Hertel 2015; Solon 1992). A segment of this intergenerational mobility literature, focusing specifically on the effects of childhood poverty on adult outcomes, has demonstrated that experiencing childhood poverty increases the likelihood of poverty in young adulthood (Brooks-Gunn and Duncan 1997; Corcoran 1995; Duncan and Rodgers 1991; Mayer 1997; Musick and Mare 2004). Childhood poverty exposure may influence young adult poverty through the benchmarks associated with education, employment, and family structure or may operate through alternative pathways (Hardy and Marcotte 2022). Given that both childhood and young adult poverty rates are higher for Black individuals, the intergenerational persistence of poverty may also be closely connected to persistent racial discrimination, unequal exposure to incarceration, segregation and negative neighborhood effects, and related factors (Michener 2018; Sharkey 2008; Western and Pettit 2005).

Despite strong evidence that family background shapes one's economic opportunity, many analyses of the relationship between young adult benchmarks and poverty have not sufficiently considered childhood poverty exposure. Most cross-sectional studies of poverty have ignored family background altogether, generally because of data limitations. In the life course literature, the primary empirical support for the Success Sequence is from studies attempting to account for family origins by controlling for family income when the young adult was aged 12–17. However, this narrow age band misses the most critical years of child development (before age 10) and therefore does not capture the persistence of disadvantage throughout childhood.

We propose that a proper accounting of benchmarks and poverty must consider how racial differences in childhood poverty exposure influence young adult outcomes. In doing so, we can investigate (1) the extent to which childhood poverty affects the attainment of education, employment, and family structure benchmarks; (2) how racial differences in childhood poverty exposure affect racial differences in young adult poverty, even among adults who meet all three benchmarks; and (3) whether racial differences in childhood poverty explain more of the racial differences in young adult poverty rates relative to differential benchmark attainment.

# Intergenerational Transmission of Opportunity

We advance three hypotheses relating to the effects of childhood poverty on young adult poverty, building off the shortcomings identified in prior research in the previous section. Figure 1 helps structure our three hypotheses and visualize the connections between childhood experiences and economic outcomes in young adulthood.

As shown in the figure, childhood poverty may affect young adult poverty through a reduced likelihood of attaining the benchmarks associated with lower poverty

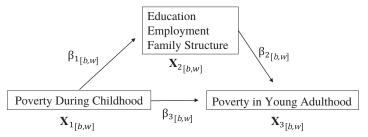


Fig. 1 Conceptual framework connecting child poverty to young adult poverty

(education, employment, and family formation), childhood poverty may influence young adult poverty independent of the benchmarks, or both.

First, we posit that racial differences in childhood poverty exposure affect racial differences in the attainment of the three young adult benchmarks. Poverty during childhood, especially early childhood, influences child development and affects socioeconomic outcomes through adulthood (Corcoran 1995; Corcoran et al. 1992; Duncan and Magnuson 2013; Duncan et al. 2012; Duncan et al. 1998; Hill and Duncan 1987; Levy and Duncan 2000; Mayer 1997). Young adults who grew up in poverty generally complete fewer years of schooling, work fewer hours, and earn lower wages relative to young adults who did not experience poverty during childhood (Duncan et al. 1998; Haveman et al. 1991; Hill and Duncan 1987; Levy and Duncan 2000; McLanahan and Sandefur 1994). Evidence on whether childhood poverty is associated with out-of-wedlock childbearing is less consistent (Duncan and Magnuson 2013; Musick and Mare 2006), although wealth appears to be an important predictor of marriage (Schneider 2011). The consequences of childhood poverty exposure for Black men appear to be particularly stark (Corcoran and Adams 1997; Duncan et al. 2012; Reeves et al. 2015; Winship et al. 2018).

Given that Black children are far more likely to grow up in poverty than White children (Corcoran and Adams 1997; McLoyd 1990; Nolan et al. 2016), we first ask, To what extent do racial differences in childhood poverty shape racial differences in attaining the education, employment, and family structure benchmarks?

# Benchmark Attainment and Young Adult Poverty

Second, we posit that benchmark attainment does not fully account for racial differences in young adult poverty. One potential explanation for why benchmark attainment might not close racial gaps in young adult poverty is that the returns to the benchmarks may be weaker for Black adults relative to White adults. For example, completing high school may do less to lift young Black adults out of poverty relative to White adults. Alternatively, even if the returns do not meaningfully vary, the relative returns for young Black adults may not be strong enough to overcome other sources of racial disadvantage.

Consider, for example, that resume audit studies find that Black men are less likely to be offered an interview for a job relative to White men, even if the applicants have otherwise similar characteristics (Bertrand and Mullainathan 2004; Pager 2003;

Quillian et al. 2017). Even among workers in the same occupation, Black men and women earn less, on average, than their White counterparts (Leicht 2008). In broad terms, young Black adults face a compounding set of disadvantages—including racial discrimination, lower quality schools, historical barriers to wealth accumulation, higher poverty neighborhoods, and greater exposure to childhood poverty—that may contribute to higher poverty rates in young adulthood, even for those who meet benchmarks related to education, employment, and family formation (Chetty et al. 2014; Cross 2020; Michener 2018; Pfeffer and Killewald 2019; Sharkey 2008, 2013; Walters 2001; Zewde 2019).

#### The Direct Association of Childhood Poverty With Young Adult Poverty

Third, we posit that childhood poverty exposure has large, direct associations with young adult poverty, independent of the education, employment, and family formation benchmarks. We expect that childhood poverty exposure affects poverty in young adulthood through mechanisms that extend beyond the young adult benchmarks, which would again suggest that studies focusing primarily on young adult benchmarks have critically overlooked the negative effects of childhood poverty: not only does childhood poverty affect benchmark attainment, but it may also influence a broad set of factors not captured in point-in-time models estimating the effects of benchmark attainment on young adult poverty.

These alternative pathways between childhood poverty and young adult poverty may operate through individual or contextual channels. At the individual level, as discussed earlier, childhood poverty may affect health outcomes, cognitive development, and psychological well-being, each of which can influence the likelihood of poverty in young adulthood independent of education, employment, and family formation (Brooks-Gunn and Duncan 1997; Duncan et al. 2010; Haveman et al. 1991; Hill and Duncan 1987; McLoyd 1990, 1998; Ziol-Guest et al. 2012). At the contextual level, place and policy context influence both childhood poverty and young adult poverty (Brady et al. 2017; Chetty et al. 2014; Corcoran and Adams 1997; Michener 2018; Sharkey 2013). The literature on neighborhood effects, for example, demonstrates that growing up around a large share of poor families has negative effects on socioeconomic outcomes in adulthood, independent of one's own childhood poverty status (Chetty et al. 2014; Sharkey 2013). Moreover, states and jurisdictions with more Black residents often offer less generous access to redistributive and health care policies, ranging from cash assistance to health insurance through Medicaid (Michener 2018; Parolin 2021). Adjudicating the many pathways through which childhood poverty might translate into young adult poverty is not the focus of this study; instead, we interpret the direct association between childhood poverty and young adult poverty as encompassing all individual and contextual factors (other than the benchmarks) that disadvantage children who grow up in poverty.

We also posit that the consequences of childhood poverty exposure will vary by sex. As noted earlier, Black men growing up in poverty tend to face a greater risk of incarceration and persistent racial discrimination in the labor market. Therefore, we posit that childhood poverty exposure will affect young Black men's poverty

status independent of benchmark attainment. Among Black women, we posit that the consequences of childhood poverty will be channeled more through the benchmarks. Nonresident fatherhood is more common among Black families (partly because of the differential exposure to childhood poverty and criminal justice systems; see Western and Wildeman 2009), and Black women are thus more likely than White women to be single parents. To the extent that childhood poverty exposure influences single parenthood and single parenthood influences young adult poverty, childhood poverty may affect young adult poverty among women, more so than among men, through the family structure benchmark. For men and women alike, however, we anticipate that the direct, negative consequences of childhood poverty will explain more of the racial variation in young adult poverty rates than attainment of the education, employment, and family formation benchmarks.

#### **Data and Methods**

#### Data

Our primary data source is the Panel Study of Income Dynamics, which captures socioeconomic outcomes for individuals throughout their lives.<sup>2</sup> The PSID spans 1968–2019, with a total sample size of nearly 900,000 respondent-years (approximately 16,000–30,000 individuals per year). We use the WZB-PSID File, which incorporates indicators, such as posttax/posttransfer income, from the Cross-National Equivalent Files (CNEF), the collection of comparable, cross-national panel studies (Brady and Kohler 2022). Because we are interested in the effect of childhood poverty on young adult outcomes, we restrict our sample to respondents observed in the data for at least six years between birth and age 10 and in at least one year between ages 25 and 30. We drop the nine respondents in this subsample who reported being employed and working more than 10 hours per week but reported a pretax/pretransfer income of zero (Dynan et al. 2012; Schneider et al. 2018). We include all young adults who meet these characteristics in our sample, yielding a final sample size of 5,994 respondents (with each respondent included once). Of this group, 3,045 are men, 2,949 are women, 3,331 identify as White, and 2,663 identify as Black.<sup>3</sup> Differences in the racial breakdowns between men and women in the subsample are not statistically significant. Although selective attrition could theoretically be a concern, recent studies have found little to no evidence of biased estimates due to attrition in intergenerational PSID models (Fitzgerald 2011; McGonagle et al. 2012). We apply sample weights in all analyses.

<sup>&</sup>lt;sup>2</sup> The National Longitudinal Survey of Youth (NLSY), in contrast, begins its data collection at age 12. An exception is the NLSY Child and Young Adult sample. However, this Child and Young Adult supplement does not include comprehensive measures of income or poverty status for the young adults.

<sup>&</sup>lt;sup>3</sup> Because this study is focused on Black–White differences in poverty, we exclude the small subset of respondents identifying as American Indian (70 respondents in our subsample), Asian (10 respondents), or "other" (106 respondents). We do not exclude respondents who identify as both Hispanic and either White or Black, but we control for Hispanic status in our regression models.

#### Measures

# Early Childhood Outcomes

Our primary outcome of interest during childhood is poverty status. Following previous research (e.g., Corcoran and Adams 1997), we use a modified version of the official poverty measure (OPM) within the PSID. Specifically, we adopt a posttax/posttransfer measure of resources (including benefits from the Supplemental Nutrition Assistance Program and refundable tax credits), but we apply the OPM poverty thresholds (which vary by family size and structure) for the given year and family type. 4 The inclusion of these noncash benefits in income assessments is particularly important when poverty is evaluated over time because in-kind transfers and refundable tax credits have grown substantially in recent decades (Pac et al. 2017; Wimer et al. 2020b). We cannot consistently replicate the Supplemental Poverty Measure or its thresholds in the PSID (Kimberlin et al. 2016). In the online appendix (section B), we replicate our results using a relative measure of poverty (i.e., equivalized household income less than 50% of the national annual median) and a pretax/pretransfer version of our modified OPM measure to test the robustness of our results with alternative specifications of poverty. We measure childhood poverty exposure as the share of a child's life between birth and age 10 spent in poverty. In the online appendix (section C), we replicate our results using different age bands (ages 0–5, 6–10, and 11–17) to test the sensitivity of our findings to our primary age specification.

#### Young Adult Outcomes

We measure young adult outcomes primarily at age 30. For individuals who had not yet reached 30 or were not in the data during their 30th year, we take the oldest age of available data between ages 25 and 29. Outcomes for each individual were measured only once in young adulthood. In sensitivity tests presented in the online appendix (section B), we also examine the data using several alternative age cutoffs. For most of the sample (76%), outcomes were measured at age 30. As detailed later, we include an age dummy variable in all models to account for potential age effects that influence outcome differences between, say, 25- and 30-year-olds in our sample.

Our primary outcomes of interest in young adulthood are poverty status and the attainment of education, employment, and family formation benchmarks. For poverty, we apply the same measure used for measuring poverty during childhood. To avoid measurement error when identifying poverty status in a single year, we calculate the young adult's mean poverty rate over ages 25–30. The specification of the three primary benchmarks and the benchmarks used in our sensitivity checks are

<sup>&</sup>lt;sup>4</sup> Unlike the Supplemental Poverty Measure, this modified poverty measure does not include transfers such as utility subsidies, the value of school meals, or housing assistance. In 2018, the OPM threshold for a two-parent, two-child family was an annual income of \$25,465; the threshold for a single adult was \$12,784.

outlined in the online appendix (section A). Here, we briefly summarize our primary indicators, which closely follow those employed in the Success Sequence and other studies in the individualist/behavioralist framework.

Our primary education benchmark is attaining a high school diploma or GED by young adulthood. Our primary employment benchmark is working full-time (35 or more hours per week) or studying to pursue a college degree. Our primary family formation benchmark is not having a child before marriage at the time of the survey. Young adults without children are coded as meeting this benchmark, as are young adults who indicated that they were married before or in the same year as having a child.<sup>5</sup>

We emphasize one data limitation upfront: for our family formation benchmarks, we can identify whether the young adult has a child only if the adult lives in the same household as the child. Thus, nonresident parents without children in their current home are measured as not having children. We expect that this situation primarily affects young adult fathers. However, this classification is consistent with how poverty is measured, given that one's poverty threshold varies on the basis of the number of individuals present in the family unit within the same household. For this reason, the limitation should not meaningfully alter our understanding of the association between the benchmarks and young adult poverty status.

# **Estimation Strategy**

We estimate three sets of models, following the three pathways (identified in Figure 1) through which childhood poverty affects young adult poverty. Each model is estimated separately for men and women. First, we measure the association between childhood poverty and the attainment of the three benchmarks:

$$Benchmark_{it} = \pi_1 ChildPov_i + \pi_2 Black_i + \pi_3 \left( ChildPov_i \times Black_i \right) + \pi_4 \mathbf{X}_i + \pi_5 \alpha_t + \epsilon_{it}. \tag{1}$$

The outcome,  $Benchmark_{ist}$ , is the respective benchmark (education, employment, or family structure) for a given young adult (i) in a given year (t). Because of the interaction term between childhood poverty and being Black in  $\pi_3$ , the primary effect of childhood poverty in  $\pi_1$  refers to the effect of childhood poverty on the benchmark for young White men or women.  $\pi_2$  provides the relative likelihood that a young Black adult who did not experience childhood poverty achieves the benchmark relative to a young White adult.  $\pi_3$  then informs us whether the effect

<sup>&</sup>lt;sup>5</sup> In our sample, 43% of young adults met all three benchmarks compared with Wilcox and Wang's (2017) finding of 50% in the NLSY. Among those in our sample meeting all three benchmarks, 47% were young White adults (57% in Wilcox and Wang), and 24.5% were young Black adults (24% in Wilcox and Wang). The differences in attainment rates appear to be attributable to Wilcox and Wang's inclusion (and our exclusion) of "being married and taking care of children" as an indicator of employment. When we count this indicator as employment, we estimate that 50% of young adults meet all three benchmarks (56% for White adults and 27% for Black adults), nearly identical to Wilcox and Wang's figures.

of childhood poverty on benchmark attainment varies by race. **X** is a vector of controls that includes age and Hispanic ethnicity. Year dummy variables are captured in  $\delta_t$ . In this model, we are primarily interested in whether childhood poverty affects our benchmarks of interest  $(\pi_1)$  and whether the strength of the relationships varies by race  $(\pi_3)$ .

We then estimate the associations of the given benchmarks on poverty in young adulthood:

$$YAPov_{ist} = \varphi_1 Black_i + \varphi_2 Benchmark_i + \varphi_3 (Benchmark*Black_i) + \varphi_4 \mathbf{X}_i + \varphi_5 \alpha_i + \varepsilon_{ist}.$$
(2)

The outcome variable in Eq. (2) is poverty in young adulthood. The controls are the same as in Eq. (1), and our focus is now on the association between the benchmarks and young adult poverty and whether the association varies by race. We then shift focus toward the relationship between childhood poverty and young adult poverty. We first analyze the total association between childhood poverty and young adult poverty (independent of the benchmarks) and then analyze the mediating effect of the benchmarks. Specifically, for each race—gender pair, we estimate the following:

$$YAPov_{ist} = \delta_1 ChildPov_i + \delta_2 \mathbf{X}_i + \delta_3 \alpha_t + \varepsilon_{ist},$$
 (3a)

$$YAPov_{ist} = \gamma_1 ChildPov_i + \gamma_2 \mathbf{X}_i + \gamma_3 Benchmarks_i + \gamma_4 \alpha_t + \varepsilon_{ist}.$$
 (3b)

The total association of childhood poverty and young adult poverty is captured in Eq. (3a) in  $\delta_l$ . The mediating effect of the benchmarks is computed as the change in the relationship between childhood poverty and young adult poverty when we account for the benchmarks in Eq. (3b), or  $\gamma_1 - \delta_l$ . The direct association of childhood poverty, independent of the benchmarks, is equivalent to  $\gamma_l$ . We can also compute the share of the intergenerational persistence of poverty that is channeled through the benchmarks as  $(\delta_l - \gamma_l) / \delta_l$ . This computation is useful for making standardized comparisons across race–gender pairs and for later comparing alternative mechanisms through which child poverty affects young adult poverty. We estimate these models using the Karlson-Holm-Breen mediation tests (Breen et al. 2018), although the results are comparable when we use Imai et al.'s approach (2010). We estimate each model separately by race and gender.

As a final step, we compare the total effects of childhood poverty with the effects of the attainment of all three benchmarks on young adult poverty. Given that childhood poverty and the benchmarks are likely to be correlated (see Eq. (1)), including both in the same model would downwardly bias the coefficients on childhood poverty, reducing its association only to its direct association ( $\gamma_1$  in the prior set of equations) rather than the combined direct and indirect effects ( $\delta_1$ ). Because childhood poverty exposure predates the benchmarks and we expect it to be negatively

<sup>&</sup>lt;sup>6</sup> We apply linear probability models in our primary estimates, in part to more straightforwardly interpret the interaction terms. Results are consistent when applying logistic regression models.

associated with benchmark attainment, we perform a two-stage equation to compare the unbiased coefficients:

$$Benchmark_{ist} = \vartheta_1 ChildPov_i + \varepsilon_{ist}, \tag{4a}$$

$$YAPov_{ist} = \beta_1 ChildPov_i + \beta_2 \mathbf{X}_i + \beta_3 (Benchmark_{ist} - Benchmark_{ist}) + \beta_4 \alpha_t + \varepsilon_{ist}.$$
 (4b)

In Eq. (4a), we regress benchmark attainment (a binary variable capturing whether the respondent achieved all three benchmarks) on childhood poverty. We then compute the residual of the variable (its real value minus its predicted value from Eq. (4a)) to create a separate variable that is purged of its relationship with childhood poverty. Including the residual in Eq. (4b) allows us to compare the full, unconfounded association between childhood poverty and young adult poverty with that between benchmark attainment and young adult poverty. We run this model separately by race and gender.

To contextualize our findings, we then use Eq. (4b) to produce two counterfactual rates of young adult poverty: (1) if all Black men (or Black women) met the benchmark attainment rate of White men (or White women) but childhood poverty exposure remained the same; and (2) if all Black men (or Black women) were exposed to the same level of childhood poverty as White men (or White women). In comparing the counterfactual young adult poverty rates, as well as Black—White differences in rates, with the baseline poverty rates, we can evaluate whether equalizing benchmark attainment or equalizing childhood poverty exposure is more consequential in shaping racial differences in young adult poverty.

#### **Limitations and Analytical Scope**

We briefly emphasize two limitations of our methodological approach. First, our approach is not designed to assess a causal relationship between childhood poverty and young adult poverty. Childhood poverty exposure is correlated with other factors, such as neighborhood conditions and other place-based contextual factors (Chetty et al. 2014; Sharkey 2008, 2013), that are also likely to affect benchmark attainment and young adult poverty, independent of a child's family income. Instead, we aim to understand whether childhood poverty and the correlates for which this indicator proxies are more strongly associated with (racial differences in) young adult poverty relative to benchmark attainment. Second, and relatedly, the scope of this study is not to identify all plausible pathways through which childhood poverty might affect young adult poverty. Instead, our specific focus is on identifying whether the benchmarks are a useful framework and set of mechanisms for understanding (racial differences in) young adult poverty.

<sup>&</sup>lt;sup>7</sup> The coefficient on the residualized benchmarks variable in Eq. (4b) is thus equivalent to what it would be if we included the observed value in the same model; however, the observed value would downwardly bias the coefficient on childhood poverty, whereas the residualized version does not.

#### Results

#### **Descriptive Findings**

Table 1 provides descriptive evidence of the share of years between birth and age 10 spent in childhood poverty, the share of young adults who experienced at least one year of childhood poverty, and poverty rates in young adulthood by race and sex.

The average Black man spent more than a third (36.3%) of his childhood in poverty, compared with 7.6% for White men. Moreover, an estimated 68.4% of young Black men lived at least one year in poverty during childhood, compared with 26.1% of young White men. Poverty rates in young adulthood similarly vary: around age 30, 23.4% of young Black men lived in poverty, compared with 7.1% of young White men. Put differently, poverty rates are more than three times higher among Black males than White males in both young adulthood and childhood. Similar patterns are evident for Black and White women.

Figure 2 elaborates on how young adult poverty rates vary by childhood poverty exposure (0%, 1% to 49%, or 50% to 100% of childhood in poverty) or the attainment of the education, employment, and family formation benchmarks. Black men not exposed to childhood poverty have a 10% poverty rate in young adulthood, but this rate climbs to 35% for those who spent at least half their childhood in poverty. The patterns are similar for Black women. For White men and women, however, the poverty rate among young adults who were not exposed to childhood poverty (5%) is half that of comparable Black men and women. Among White men, the poverty rate rises to 17% for those who spent at least half their childhood in poverty—still half the rate of comparable Black men.

Across all four groups, meeting the three benchmarks strongly reduces poverty rates: young Black men and women who meet the benchmarks have poverty rates of 12% and 4%, respectively. Young White men and women who meet the benchmarks have even lower poverty rates, at 4% and 3%, respectively. Notably, young Black men who meet all three benchmarks still have a poverty rate comparable to that of young White men who do not meet the three benchmarks.

The online appendix (section A) presents descriptive statistics for the share of young Black and White adults meeting the benchmarks. Most young adults do not meet all three benchmarks. The share of young White adults meeting all three benchmarks is 47.3% (54% for men and 40% for women). The share of young Black adults meeting all three benchmarks is 24.5% (29% for men and 19% for women). Benchmark attainment is lower among young adults who were more exposed to childhood poverty.

#### **Estimation Results**

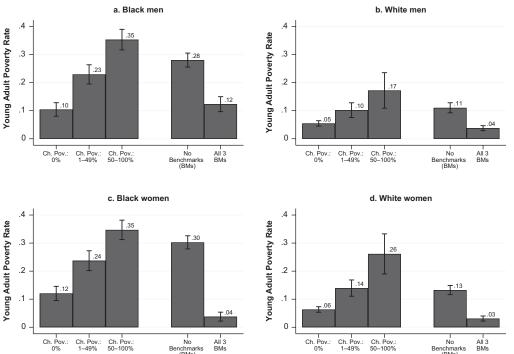
Figure 3 visualizes the conditional likelihood of achieving each benchmark by race, sex, and years spent in childhood poverty, estimated with Eq. (1); Table A3 (online appendix) displays the corresponding regression coefficients.

Panel a of Figure 3 shows that among men, each year of childhood poverty reduces the likelihood of completing high school, but no racial differences exist for young

	Share of Years in Poverty, Birth–Age 10 (%)	1+ Years in Poverty, Birth–Age 10 (%)	Poverty Around Age 30 (%)	
All Men	13.1	34.9	10.3	
White Men	7.6	26.1	7.1	
Black Men	36.3	68.4	23.4	
All Women	14.3	38.0	12.0	
White Women	8.2	29.1	9.2	
Black Women	40.2	74.0	25.2	

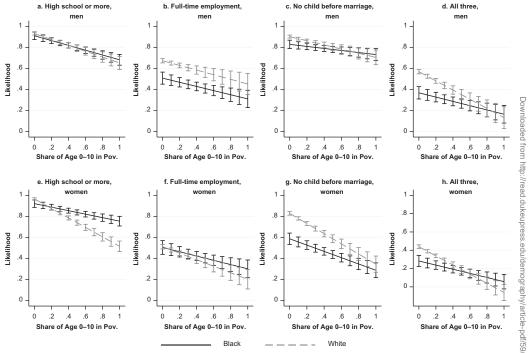
Table 1 Incidence of poverty during early childhood and young adulthood

*Notes:* The sample is 5,994 young adults born in 1965–1994 and observed once between ages 25 and 30 in the PSID. Poverty = modified OPM with posttax/posttransfer income definition.



**Fig. 2** Descriptive statistics on poverty at age 30 by childhood poverty duration, attainment of all three benchmarks, race, and sex. The sample is 5,994 young adults observed once between ages 25 and 30 in the PSID. Poverty = modified OPM with posttax/posttransfer income definition. Error bars reflect 95% confidence intervals. The share meeting all three benchmarks is 47.3% for White adults (54% for men, 40% for women) and 24.5% for Black adults (29% for men, 19% for women). Ch. Pov. = childhood poverty.

adults experiencing the same rate of childhood poverty (although Table 1 suggests that Black men are more likely to grow up in poverty). The conditional likelihood of completing high school for Black and White men who do not experience child poverty is approximately 92%, compared with approximately 70% for those experiencing poverty from birth to age 10. The estimates suggest that observed racial differences in

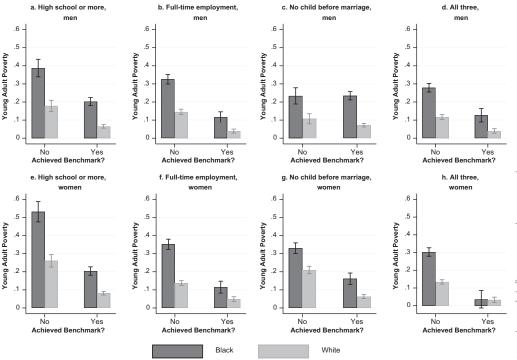


**Fig. 3** Likelihood of benchmark attainment in young adulthood by race, sex, and share of childhood (from birth to age 10) in poverty. The *y*-axis represents the estimated likelihood of achieving the given benchmark around age 30. The corresponding regression coefficients are presented in Table A3 (online appendix). Controls are included for age, Hispanic status, and year effects. The results are from Eq. (1). Error bars reflect 95% confidence intervals. Pov. = poverty.

the completion of high school (documented in section A of the online appendix) are primarily due to racial differences in childhood poverty exposure. Panel e shows that the pattern of high school completion is mostly similar for Black and White women, although White women who spend more than half their first 10 years in childhood poverty are less likely to graduate high school than comparable Black women.

Childhood poverty is negatively associated with full-time employment for all race—gender pairs. Among those who did not experience childhood poverty, Black men are 17 percentage points less likely to achieve full-time employment relative to White men; among men who spent their entire childhood in poverty, the gap in employment rates is 14 percentage points (panel b of Figure 3). The conditional likelihood of achieving full-time employment for Black women experiencing no child poverty and those experiencing 10 years of child poverty is 50% and 30%, respectively; the corresponding figures for White women are 51% and 20%, respectively (panel f).

Childhood poverty is also negatively associated with the likelihood that young adult women have a child before marriage. At no exposure to childhood poverty, Black women are 19 percentage points less likely to meet this benchmark; at full exposure to childhood poverty, Black and White women are equally unlikely to meet this benchmark (panel g of Figure 3).



**Fig. 4** Conditional likelihood of poverty in young adulthood by benchmark attainment and race. Controls are included for age, Hispanic status, and year effects. The results are from Eq. (2), with no control for childhood poverty exposure. Error bars reflect 95% confidence intervals.

Panels d and h show the consequences of childhood poverty for meeting all three benchmarks. Both Black and White adults are less likely to attain all three benchmarks if they grow up in poverty, and the negative effect of spending one's first 10 years in poverty (vs. not experiencing childhood poverty) is larger than racial gaps in the likelihood of attaining the benchmarks at any given point along the childhood poverty distribution.

We now turn to the benchmark-to-poverty relationship to understand whether meeting the benchmarks closes racial differences in young adult poverty. Figure 4 plots the conditional likelihood of poverty in young adulthood (*y*-axis) for young Black and White adults (black vs. gray bars) who either achieved or did not achieve each of the three benchmarks (*x*-axis), as estimated using Eq. (2). Panel a, for example, shows that the conditional likelihood of poverty for a young Black adult who did not complete high school is 38.7%, twice the rate of young White adults who did not complete high school (18%). Among men who did complete high school, Black men are more than three times as likely as their White counterparts to live in poverty in young adulthood (20.2% vs. 6.5%). The patterns are similar for women (panel e). Even among women who did complete high school, Black women are again more than twice as likely as White women to live in poverty in young adulthood (20.4% vs. 8.1%).

Similar patterns are evident for full-time employment. Black men and women are more likely to live in poverty than their White counterparts, regardless of whether

**Table 2** Estimates of the direct association of childhood poverty with young adulthood poverty (dependent variable) and share mediated through employment, education, and family structure benchmarks

	Black Men ( <i>n</i> =1,190)	White Men $(n=1,652)$	Black Women $(n=1,262)$	White Women $(n = 1,603)$
A. Mediating Effect of Benchmarks				
Total association: Share of childhood				
in poverty	0.25***	0.22***	0.28***	0.26***
	(0.05)	(0.05)	(0.05)	(0.05)
Direct association: Share of childhood				
in poverty	0.23***	0.19***	0.23***	0.22***
	(0.05)	(0.05)	(0.05)	(0.05)
Indirect association mediated through				
benchmarks	0.02**	0.03***	0.05***	0.04***
	(0.01)	(0.01)	(0.01)	(0.01)
% Mediated through benchmarks	9.2	12.4	17.5	17.1
B. Estimated Effects of Childhood Poverty				
and Benchmarks on Young Adult Poverty				
All three benchmarks (unconfounded)	-0.12***	-0.06***	-0.23***	-0.09***
	(0.02)	(0.01)	(0.02)	(0.01)
Share of childhood poverty			, í	
(direct + indirect)	0.25***	0.22***	0.28***	0.26***
	(0.03)	(0.03)	(0.03)	(0.03)

Notes: The results are from Eqs. (3a), (3b), (4a), and (4b). All models feature age, Hispanic status, and year controls.

they work full-time (panels b and f of Figure 4). Turning to family formation in panel g, we see that Black women who do not have a child before marriage are still nearly three times as likely as White women to live in poverty in young adulthood (16.2% vs. 6.3%). Panels d and h show that, even among young adults who meet all three benchmarks, racial differences in young adult poverty persist: Black men are still three times as likely as White men to live in poverty in young adulthood (12.7% vs. 4%), though Black women meeting all three benchmarks have a comparable poverty rate to White women meeting all three benchmarks. Recall that only 40% of White women and 19% of Black women met all three benchmarks.

Table 2 compares the effects of childhood poverty exposure and attainment of the three benchmarks on young adult poverty. Panel A evaluates the extent to which benchmark attainment mediates the relationship between childhood poverty and young adult poverty (following Eqs. (3a) and (3b)); panel B compares the unconfounded effects of the two indicators on young adult poverty (following Eqs. (4a) and (4b)).

The top row demonstrates that the total association between childhood poverty (not conditional on the benchmarks) and young adult poverty ranges from 0.22 for White men to 0.28 for Black women: spending one's entire childhood in poverty is associated with a 22- to 28-percentage-point increase in the likelihood of poverty in young adulthood. This association declines after we account for attainment of the three benchmarks: by 2 percentage points for Black men, 3 percentage points for White men, 5 percentage points for Black women, and 4 percentage points for White women. For Black and White men,

<sup>\*\*</sup>p<.01; \*\*\*p<.001

then, only approximately 9% to 12% of the association between childhood poverty and young adult poverty is channeled through the benchmarks. For White and Black women, the share is approximately 17%. For all groups, the association between childhood poverty and young adult poverty is strong and positive, and it is only moderately channeled through the education, employment, and family structure benchmarks.

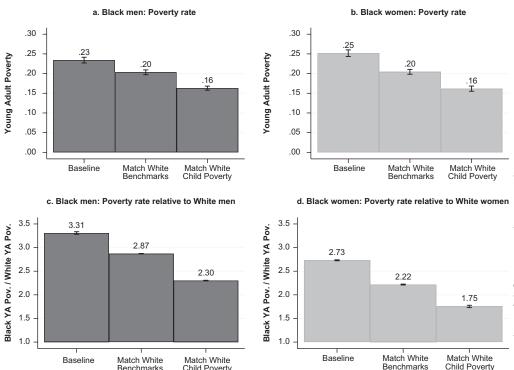
Panel B of Table 2 compares the unconfounded effects of childhood poverty and benchmark attainment on young adult poverty. The total effects of childhood poverty exposure are, by definition, identical to the estimates from the mediation test. The coefficients for attainment of the three benchmarks, by contrast, represent the estimated poverty reduction for a young adult meeting all three benchmarks, independent of childhood poverty experience. Among Black men, meeting all three benchmarks is associated with a 12-percentage-point decrease in the likelihood of young adult poverty; in contrast, a young Black man who spends his entire childhood in poverty is 25 percentage points more likely to live in poverty. Among White men, benchmark attainment is associated with a 6-percentage-point reduction in young adult poverty, compared with a 22-percentage-point increase for a White man who experienced poverty throughout childhood.

Among Black women and White women, meeting all three benchmarks is associated with 23- and 9-percentage-point reductions in poverty, respectively. The consequences of experiencing poverty throughout childhood are again larger—with increases of 28 and 26 percentage points for Black women and White women, respectively—than the consequences of meeting the benchmarks.

Our final analysis contextualizes these findings by comparing the role of childhood poverty differences with that of benchmark differences in shaping racial differences in young adult poverty. Panels a and b of Figure 5 illustrate the observed poverty rates, and panels c and d illustrate the Black—White poverty gaps, in three scenarios: (1) the baseline, real-world scenario; (2) a scenario in which Black men (and Black women) matched the benchmark attainment rate of White men (and White women); and (3) a scenario in which Black men (and Black women) matched the childhood poverty exposure rate of White men (and White women). The third scenario captures the total effects of childhood poverty, including the direct association between childhood poverty and young adult poverty, but also the increased share of benchmark attainment as a result of the reduced childhood poverty exposure.

Panel a shows that the observed poverty rate for young Black men is 23%, which is 3.31 times that of young White adults, as panel c documents. Our estimates suggest that if Black men's benchmark attainment rate matched that of White men (i.e., increasing from 29% to 54%), the poverty rate among young Black men would fall from 23% to 20%. This decrease would contribute to a decline in the Black—White gap of 0.44: Black men's poverty rate would decline from 3.31 to 2.87 times the poverty rate of White adults. If, instead, Black men's childhood poverty exposure rate matched White men's, Black men's poverty rate in young adulthood would fall to 16%. This decrease would contribute to a decline in the Black—White gap from 3.31 to 2.30 (a decline of 1.11). Thus, equalizing childhood poverty exposure has more than twice the effect of equalizing benchmark attainment in reducing Black—White gaps in young men's poverty.

<sup>&</sup>lt;sup>8</sup> This reduction in young adult poverty is also evident given that 0.25 (the increase in benchmark attainment for Black men) multiplied by 0.12 (the reduction for Black men meeting all three benchmarks, as in Table 2) equals 3 percentage points.



**Fig. 5** Counterfactual poverty rates and gaps if young Black adults met the benchmark attainment rate and child poverty exposure rate of young White adults. Controls are included for age, Hispanic status, and year effects. The results are from Eq. (4b). Error bars reflect 95% confidence intervals. The share meeting all three benchmarks is 47.3% for White adults (54% for men, 40% for women) and 24.5% for Black adults (29% for men, 19% for women). Child poverty exposure is 8% among White adults and 38% among Black adults (no significant differences across sex). YA Pov. = young adult poverty.

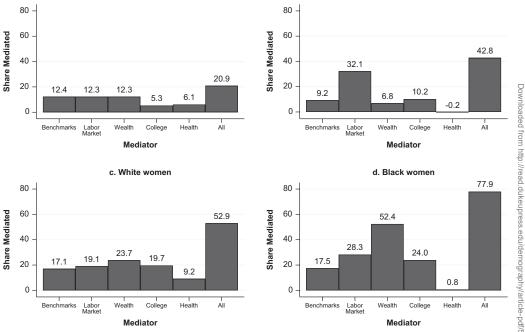
Panels b and d of Figure 5 show that, among young Black women, the observed poverty rate is 25%—2.73 times the rate of young White women. If Black women's benchmark attainment rate matched that of White women (i.e., increasing from 19% to 40%), the poverty rate among young Black women would fall from 25% to 20%. This decrease would contribute to a decline in the Black—White gap from 2.73 to 2.22 times the poverty rate of White women (a decline of 0.51). If, instead, Black women's child poverty exposure rate matched White women's, young Black women's poverty rate would fall to 16%. This decrease would contribute to a decline in the Black—White gap from 2.73 to 1.75 (a decline of 0.98). As we find for men, equalizing childhood poverty exposure has roughly twice the effect of equalizing benchmark attainment in reducing Black—White gaps in young women's poverty.

#### **Alternative Pathways**

Our results demonstrate a strong relationship between childhood poverty and young adult poverty, independent of the benchmarks. However, what the literature and this

a. White men

b. Black men



**Fig. 6** Alternative mediators of the association between childhood poverty and young adult poverty. See Eqs. (3a) and (3b). Controls are included for age, Hispanic status, and year effects. Benchmarks represent education, employment, and family structure benchmarks used in the primary analysis (see section A of the online appendix). "Labor market" includes current occupation (set to 0 if jobless), union membership, and whether employed part-time (vs. full-time). "Wealth" is a decile rank measured as all liquid and near-liquid assets plus home equity. "College" is a binary indicator that represents the completion of a college degree. "Health" is a five-point measure of self-reported health. "All" includes all the aforementioned indicators in the same model.

study refer to as the *direct associations of childhood poverty with young adult poverty* are more accurately conceptualized as associations that are channeled not through the primary benchmarks of interest but instead through alternative pathways. Given our primary focus on benchmarks related to education, employment, and family structure, a full analysis of these alternative pathways is beyond the scope of this study. Nevertheless, we conduct additional analyses to offer initial insights into what those alternative pathways may be.

In Figure 6, we expand the mediation analyses presented in Table 2 to test whether the inclusion of alternative indicators explains more of the relationship between child-hood poverty. These indicators include (1) the same benchmarks as evaluated in the primary analyses; (2) labor market outcomes; (3) the individual's total family wealth decile in young adulthood; (4) bachelor's degree attainment; (5) a five-scale measure of self-reported health; and (6) each of the prior five indicators included in one model. The values on the *y*-axis represent the share of the childhood poverty–young adult poverty relationship mediated by the given indicator(s), following Eqs. (3a) and (3b).

Among all the observed indicators, the labor market variables explain the largest share of the childhood and young adult poverty relationship for Black men (32.1%;

panel b). Including all indicators mediates 20.9% and 42.8% of the intergenerational poverty for White men and Black men, respectively (panels a and b). Among women, the wealth decile carries the most relative weight. The combined indicators mediate 52.9% and 77.9% of the relationship between childhood poverty and young adult poverty among White women and Black women, respectively (panels c and d). The remaining unexplained relationship between childhood poverty and young adult poverty, particularly among men, warrants future investigation.

# **Sensitivity Tests**

To evaluate the consistency of the results under alternative specifications of benchmarks and modeling decisions, we run the following sensitivity tests: (1) reestimating our results with a relative measure of poverty, pretax/pretransfer measure of poverty, a measure of deep poverty, and a measure of near poverty (Figures B1–B4, online appendix); (2) using an alternative specification of each benchmark (Figure B5); (3) measuring the mean poverty rate for ages 30–35, 35–40, and 40–45 (Figures B6–B8); (4) evaluating variation in the consequences of childhood poverty by the depth of childhood poverty, age at childhood poverty exposure, and nonlinear specifications of childhood poverty duration (Tables C1–C3, online appendix); and (5) analyzing over-time changes over in child poverty rates and the relationship between childhood poverty and young adult poverty (section D of the online appendix). These alternative modeling decisions do not meaningfully affect our conclusions.

#### **Discussion and Conclusion**

This study investigates how racial differences in childhood poverty and attainment of benchmarks related to education, employment, and family formation affect racial differences in young adult poverty. Combining individualistic and behavioralist theories of poverty with contextual and structuralist theories allows us to assess the relationships among childhood poverty exposure, benchmark attainment, and young adult poverty among Black and White adults.

We find that racial differences in childhood poverty are more consequential than differential attainment of education, employment, and family formation benchmarks in shaping racial differences in young adult poverty. Although achieving a high school diploma, working full-time, and delaying childbirth until marriage reduce the likelihood of poverty, racial differences in benchmark attainment do not meaningfully explain Black—White gaps in young adult poverty for three reasons.

First, childhood poverty is strongly and negatively associated with young adults' benchmark attainment. We observe large selection effects into the behavioral outcomes associated with lower poverty. Each additional year of childhood poverty reduces the likelihood that a young adult will complete high school, achieve full-time employment, or wait until marriage to have a child. Among White and Black adults who spent at least half their childhood in poverty, we find no significant differences

in attainment of the three benchmarks. In reality, however, young Black adults were exposed to childhood poverty at four times the rate of young White adults, contributing to the observed racial differences in benchmark attainment. These findings are broadly consistent with prior evidence on the long-lasting consequences of childhood poverty (Brooks-Gunn and Duncan 1997; Duncan and Magnuson 2013; Duncan et al. 2011; Duncan et al. 2010; Haveman et al. 1991). However, they also offer new and more recent insight into differences by race and sex, as well as into how racial differences in childhood poverty exposure align with racial differences in young adults' benchmark attainment.

Second, our findings demonstrate that even among those who achieve all three benchmarks, the likelihood of poverty for young Black men is approximately three times that for young White men. Thus, benchmark attainment in young adulthood is insufficient to close racial gaps in young men's poverty. For Black and White women meeting all benchmarks, however, poverty rates are not significantly different. Although the benchmarks contribute to notable reductions in poverty *levels* for all groups (consistent with Haskins and Sawhill 2009 and Wilcox and Wang 2017), they are insufficient to equalize poverty rates among White and Black men. Moreover, most young adults—even when we limit the sample to young White adults—do not achieve all three benchmarks.

Third, we find that childhood poverty is strongly and directly associated with young adult poverty, independent of the benchmarks. In fact, childhood poverty is more strongly associated with young adult poverty than benchmark attainment. The poverty-increasing effects of experiencing poverty from birth to age 10 years are larger than the poverty-reduction effect of earning a high school diploma, maintaining full-time employment, and postponing childbirth until after marriage. In a counterfactual analysis in which Black men's and women's benchmark attainment rates or childhood poverty rates matched White men's and women's, we find that poverty levels for young Black adults, as well as racial gaps relative to young White adults, decline more when childhood poverty rates are equalized. Specifically, equalizing childhood poverty exposure has twice the effect of equalizing benchmark attainment in reducing Black—White gaps in young adult poverty.

In closing, we note limitations of our study, as well as opportunities for future research. First, our study was primarily focused on the extent to which childhood poverty shapes racial differences in young adult poverty, but it does not fully investigate the mechanisms linking childhood poverty to young adult poverty. Our initial investigation of alternative pathways revealed the importance of labor market outcomes for men and factors related to employment, wealth, and a college degree for women, but each of these channels warrants greater attention.

Second, given the nature of our data, our results focused on child poverty outcomes among individuals who grew up primarily in the 1970s and 1980s. Racial gaps in childhood poverty have declined in more recent decades (see section D, online appendix), which likely portends future declines in racial disparities in young adult poverty.

Moving forward, scholars should continue to investigate how policy interventions addressing child poverty affect racial differences in poverty throughout the life course. As this study finds, reducing child poverty and especially racial differences in child poverty is important for reducing longer term inequalities in economic opportunity.

Acknowledgments For helpful comments and suggestions, we are grateful to David Brady, Sophie Collyer, Christina Ciocca Eller, Megan Curran, Jayanti Owens, Irwin Garfinkel, Richard Reeves, and participants of the 2021 Population Association of America annual meeting, the 2021 American Sociological Association meeting, the University of Michigan PSID seminar series, the University of Trento seminar series, and Bocconi University seminar series led by Francesco Billari and Catherine de Vries. We acknowledge funding from the Bill & Melinda Gates Foundation and the JPB Foundation.

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Zachary Parolin (corresponding author) zachary.parolin@unibocconi.it

Parolin • Department of Social and Political Sciences, Bocconi University, Milan, Italy; https://orcid.org/0000-0003-4065-3711

Matsudaira • Teacher's College, Columbia University, New York, NY, USA

Waldfogel • Center on Poverty and Social Policy, Columbia University, New York, NY, USA

Wimer • Center on Poverty and Social Policy, Columbia University, New York, NY, USA; https://orcid.org/0000-0002-9688-0449