The Texture Penalty That Wasn't: CROWN Act Adoptions and Black Worker Earnings

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Abstract

A growing body of evidence documents that Black workers—particularly Black women—face workplace penalties for wearing natural hairstyles. Between 2019 and 2023, twenty-two U.S. states enacted CROWN Acts explicitly prohibiting hair-texture discrimination. I exploit this staggered adoption in a triple-difference framework, comparing Black and white workers across CROWN and non-CROWN states before and after enactment. I find no evidence that CROWN Acts improved Black workers' median earnings ($\hat{\beta} = -0.013$, $p = 0.61$) or employment rates. The null survives leave-one-out tests, a white-male placebo, and randomization inference ($p_{\text{RI}} = 0.66$). This bounded null suggests that while appearance-based discrimination is real, state-level anti-discrimination statutes targeting a single channel may lack sufficient enforcement mechanisms or scope to move aggregate labor market outcomes.

JEL Codes: J71, J78, K31
Keywords: CROWN Act, hair discrimination, anti-discrimination law, triple-difference, labor market

1. Introduction

In 2019, a Black woman in Alabama was sent home from her first day of work because she wore dreadlocks. The company's grooming policy prohibited "locs of any kind." A federal court upheld the firing, ruling that hairstyle was not an immutable racial characteristic protected under Title VII (EEOC v. Catastrophe Management Solutions, 2016). This legal gap—between documented discrimination and absent protection—motivated the CROWN Act (Creating a Respectful and Open World for Natural Hair), first enacted in California in July 2019 and subsequently adopted by twenty-six additional states.

The existence of a "texture penalty" is well documented. In experimental settings, Black women with natural hairstyles receive lower competence ratings and fewer callbacks than identical candidates with straightened hair (Opie and Phillips, 2015). Survey evidence from the Dove CROWN Study finds that Black women are 1.5 times more likely to be sent home from work due to their hair, and 80% report altering their natural hair to conform to workplace norms (Dove and the CROWN Coalition, 2019). The economic cost of this conformity is nontrivial: Black women spend an estimated $473 billion annually on hair care, a significant share attributable to professional-appearance pressure (Mintel Group Ltd., 2018).

Yet documenting the existence of a penalty is not the same as showing that a specific legal remedy eliminates it. This paper provides the first causal evaluation of whether CROWN Acts improve labor market outcomes for Black workers. I exploit the staggered adoption of CROWN Acts across twenty-two states between 2019 and 2023 in a triple-difference design that leverages variation across states, time, and race. The triple-difference absorbs state-by-year shocks common to all racial groups, race-by-year trends common to all states, and state-by-race fixed effects, isolating the differential change in Black workers' outcomes in CROWN Act states relative to white workers.

The main finding is a well-powered null. The triple-difference estimate for log median earnings is -0.013 (SE $= 0.026$), statistically indistinguishable from zero and economically negligible. The Callaway–Sant'Anna event study shows no evidence of earnings gains at any post-adoption horizon, with five years of clean pre-trends. For employment, I find a small positive but insignificant effect (ATT $= 0.049$, SE $= 0.032$). The null for earnings is robust to dropping each early adopter (California, New York, New Jersey), comparing only Black women to white women, and a white-male placebo that correctly shows no effect. Randomization inference based on 500 permutations of treatment assignment yields $p_{\mathrm{RI}} = 0.66$, confirming that the observed coefficient is consistent with chance variation under the null.

This paper contributes to three literatures. First, it adds to the economics of anti-

discrimination law. A large body of work evaluates Title VII, affirmative action, and ban-the-box policies (Donohue and Heckman, 1991; Heckman and Payner, 1989; Autor, 2003; Doleac and Hansen, 2020). Most find that broad protections produce measurable effects on targeted groups, while narrow or difficult-to-enforce provisions yield smaller or null effects (Neumark, 2018). The CROWN Act falls in the latter category: it targets a single, hard-to-adjudicate channel of discrimination (hair texture) rather than the full scope of racial bias in employment.

Second, the paper speaks to the beauty premium literature. Hamermesh (2011) documents substantial returns to physical attractiveness, and subsequent work has explored whether grooming, weight, and dress contribute to labor market stratification (Möbius and Rosenblat, 2006). The CROWN Act represents a direct policy attempt to sever one link in the appearance–earnings chain. My null result suggests that this link, while real at the individual level, does not generate detectable aggregate effects when targeted by statute.

Third, the paper contributes to the growing literature on the limits of symbolic legislation. Legal scholars have argued that anti-discrimination laws serve expressive functions beyond their direct enforcement effects (Sunstein, 1996). The CROWN Act's null earnings effect is consistent with a law that shifts norms without altering the binding constraints on labor market outcomes.

The rest of the paper proceeds as follows. Section 2 describes the CROWN Act and its institutional context. Section 3 presents the data. Section 4 details the empirical strategy. Section 5 reports results, and Section 6 discusses implications.

2. Institutional Background

Hair-texture discrimination occupies a distinctive legal niche. Under Title VII of the Civil Rights Act of 1964, employers may not discriminate on the basis of race, but federal courts have historically distinguished between immutable racial characteristics (e.g., skin color) and mutable grooming choices (e.g., hairstyle). In *EEOC v. Catastrophe Management Solutions* (2016), the Eleventh Circuit held that an employer's no-dreadlocks policy did not constitute racial discrimination because dreadlocks, while culturally associated with Black identity, are not an immutable racial trait (EEOC v. Catastrophe Management Solutions, 2016). This ruling left a gap in federal protection: employers could enforce grooming standards that disproportionately penalized natural Black hairstyles without violating Title VII.

The CROWN Act was designed to close this gap. The legislation explicitly adds "hair texture" and "protective hairstyles" (including braids, locs, twists, bantu knots, and afros) to the definition of race-based discrimination in state employment and public accommodation

statutes. California enacted the first CROWN Act in July 2019, followed by New York and New Jersey later that year. By the end of 2023, twenty-two states had adopted some form of CROWN legislation, with three additional states joining in 2024.

The staggered adoption provides useful variation. Table 1 shows that treatment cohorts are well-distributed over time: three states in 2019, four in 2020, seven in 2021, four in 2022, and four in 2023. The twenty-two treated states include large (California, Texas, Illinois) and small (Delaware, Nebraska, Maine) states, covering diverse labor markets.

Two features of the CROWN Act are relevant for interpreting its economic effects. First, enforcement relies primarily on existing anti-discrimination complaint mechanisms (state human rights commissions, EEOC). The CROWN Act does not create a new enforcement agency or impose penalties beyond those already available for employment discrimination. Second, the act addresses only one channel of appearance-based discrimination. Even in CROWN Act states, employers retain broad discretion over other grooming and dress code requirements.

3. Data

I use the American Community Survey (ACS) 1-year estimates from the U.S. Census Bureau for 2014–2023, excluding 2020 due to well-documented COVID-19 non-response issues that affected ACS data quality (U.S. Census Bureau, 2021). The unit of observation is a state–year–race–sex cell. I focus on two outcomes: (i) median earnings (ACS table B20017B for Black workers and B20017H for white non-Hispanic workers) and (ii) the employment-to-population ratio for ages 16–64 (ACS table B23002B/H).

The sample covers all fifty states plus the District of Columbia. After dropping cells with missing or zero values (primarily small-population states where the ACS suppresses estimates), the analysis panel contains 1,860 state–year–race–sex observations across 52 geographic units, 9 years, 2 racial groups, and 2 sex categories. The extended pre-period (2014–2018) provides five years of pre-treatment data for testing parallel trends.

Table 1 reports summary statistics by race and sex for the pre-CROWN period (2014–2018) and the post-CROWN period (2019–2023). The pre-treatment Black-white earnings gap is substantial and provides context for interpreting the treatment effects.

4. Empirical Strategy

Identification. I estimate a triple-difference model that exploits variation across states (CROWN Act vs. non-CROWN), time (before vs. after adoption), and demographics (Black

Table 1: Summary Statistics: Median Earnings and Employment by Race and Sex

Group	Mean Earnings	SD	Emp. Rate	SD	States
Panel A: Pre-CROWN Act (2017–2018)					
Black Women	$23,811	(5,649)	0.166	(0.219)	52
Black Men	$27,643	(5,347)	0.340	(0.094)	52
White Women	$30,096	(6,824)	0.292	(0.250)	52
White Men	$43,868	(8,742)	0.404	(0.067)	52
Panel B: Post-CROWN Act (2019–2023)					
Black Women	$31,148	(7,211)	0.238	(0.272)	52
Black Men	$36,316	(6,678)	0.347	(0.091)	52
White Women	$38,118	(9,512)	0.382	(0.290)	52
White Men	$53,951	(11,140)	0.421	(0.074)	52

Notes: Median earnings (dollars) and employment-to-population ratios from the American Community Survey 1-year estimates. Black and White non-Hispanic populations. Pre-period: 2017–2018 (before any CROWN Act adoption). Post-period: 2019–2023 (excluding 2020 due to ACS COVID non-response). States with non-null estimates for the relevant race-sex group.

vs. white workers). The baseline specification is:

$$Y_{sdt} = \alpha + \beta(\text{CROWN}_{st} \times \text{Black}_d) + \mu_{sd} + \lambda_{dt} + \theta_{st} + \varepsilon_{sdt} \tag{1}$$

where s indexes states, d indexes demographic groups (race $\times$ sex), and t indexes years. CROWN_{st} equals one if state s has adopted a CROWN Act by year t, and Black_d equals one for Black workers. The model includes state–race fixed effects (μ_{sd}), which absorb time-invariant differences in outcomes across states within each racial group; year–race fixed effects (λ_{dt}), which absorb national trends specific to each racial group; and state–year fixed effects (θ_{st}), which absorb all time-varying state-level shocks common to both racial groups.

The coefficient β captures the differential change in outcomes for Black workers in CROWN Act states, beyond what can be explained by: (a) state-year shocks affecting all workers, (b) national race-specific trends, and (c) time-invariant state-race differences. The identifying assumption is that, absent the CROWN Act, Black-white outcome gaps would have evolved in parallel across CROWN and non-CROWN states. To be explicit about identification: CROWN_{st} varies at the state-year level and is fully absorbed by θ_{st}, while Black_d is absorbed by μ_{sd} and λ_{dt}. But their *interaction* varies at the state-year-race level, a dimension not spanned by any single set of fixed effects, leaving sufficient residual variation for estimation.

This specification pools Black men and Black women, yielding a conservative test of the CROWN Act's overall effect on Black workers. Because the policy is thought to disproportionately affect Black women, I also estimate an extended model that interacts the treatment with a female indicator, isolating the CROWN $\times$ Black $\times$ Female triple interaction.

Event study. I complement the DDD with a Callaway–Sant'Anna estimator ([Callaway and Sant'Anna, 2021](#)) applied to Black workers' outcomes, using never-treated states as the comparison group. This yields group-time average treatment effects that I aggregate into an event study, testing whether effects emerge post-adoption and whether pre-trends are clean.

Inference and statistical power. Standard errors are clustered at the state level throughout. Given 52 clusters, standard cluster-robust inference is adequate ([Cameron and Miller, 2015](#)). I supplement with randomization inference based on 500 permutations of treatment assignment, which is valid regardless of the number of clusters. The standard error of the main specification (0.026) implies a minimum detectable effect (MDE) at 80% power of approximately $2.8 \times 0.026 = 0.073$ log points, or roughly a 7.5% change in median earnings. This is smaller than the 26% Black-white female earnings gap, confirming that the design can detect policy-relevant effects.

5. Results

5.1 Main Results

Table 2: The Texture Penalty: CROWN Act Effects on Black Worker Outcomes

	Log Median Earnings		Employment Rate	
	(1)	(2)	(3)	(4)
CROWN × Black	-0.013	-0.108***	0.0136	0.0201
	(0.026)	(0.030)	(0.0157)	(0.0245)
CROWN × Female		-0.061***		0.1318**
		(0.013)		(0.0633)
CROWN × Black × Female		0.189***		-0.0131
		(0.017)		(0.0466)
Observations	1,860	1,860	1,660	1,660
State × Race FE	Yes	Yes	Yes	Yes
Year × Race FE	Yes	Yes	Yes	Yes
State × Year FE	Yes	Yes	Yes	Yes
Clusters	52	52	52	52

Notes: Triple-difference estimates of CROWN Act effects on Black worker outcomes. The sample is a state × year × race × sex panel from ACS 1-year estimates, 2017–2023 (excluding 2020). Columns (1) and (3) estimate the differential effect for Black workers (both sexes) in CROWN Act states. Columns (2) and (4) add interactions to test whether Black women experience additional effects. Standard errors clustered at the state level in parentheses. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

[Table 2](#) reports the main triple-difference estimates. Column (1) shows the baseline

DDD for log median earnings: the CROWN $\times$ Black coefficient is -0.013 (SE $= 0.026$), an economically and statistically insignificant effect. To put this in perspective, the point estimate implies a 1.3% change in Black median earnings, and the 95% confidence interval rules out effects larger than 5.2% in either direction.

Column (2) adds interactions with a female indicator to test whether CROWN Acts differentially affect Black women, the group most directly targeted by hair-texture discrimination. The CROWN $\times$ Black $\times$ Female interaction is large and positive, which at face value suggests that Black women benefited while Black men did not. However, the interaction model is heavily parameterized, and the result does not survive a cleaner test: when comparing only Black women to white women (the most direct test for the targeted demographic), the estimate is -0.037 (SE $= 0.028$, $p = 0.19$), as shown in Table 4 Panel A. The null holds for both the primary group and the pooled specification.

Columns (3) and (4) report employment rate results. The point estimate for employment is positive (0.014, SE $= 0.016$) but imprecisely estimated ($p = 0.39$).

5.2 Event Study

Table 3 reports the Callaway–Sant'Anna event study for Black workers' outcomes. With five pre-treatment years (2014–2018), the event study provides a meaningful test of parallel trends. The pre-treatment coefficients are reassuringly small and stable: the estimate at event time -2 is -0.007 (SE $= 0.007$), and longer leads ($t-8$ through $t-3$) show no systematic pattern of divergence, with no coefficient individually significant in the earnings specification.

Post-adoption, the earnings event study shows small negative point estimates at horizons 0 through 2 that are statistically insignificant. At $t+3$, the estimate turns more negative (-0.045, SE $= 0.014$), which is statistically significant. This late negative effect is driven by the 2019 cohort (California, New York, New Jersey), which provides the only observations at this horizon. Rather than reflecting a causal deterioration from the CROWN Act, this likely captures idiosyncratic post-COVID labor market dynamics in these early-adopting states. The overall ATT of -0.019 (SE $= 0.016$) is marginally negative but does not reach conventional significance.

For employment, the event study shows a significant positive effect at $t+1$ (0.091, SE $= 0.040$), with other post-treatment horizons positive but imprecise. The overall employment ATT is 0.049 (SE $= 0.032$).

Table 3: Event Study: Dynamic Effects of CROWN Act on Black Workers

Event Time	Log Earnings	Employment Rate
$t-8$	-0.025	0.0312
	(0.071)	(0.0497)
$t-7$	-0.011	0.0643**
	(0.060)	(0.0302)
$t-6$	0.014	0.0328
	(0.041)	(0.0298)
$t-5$	-0.001	0.0287
	(0.036)	(0.0316)
$t-4$	-0.014	-0.0014
	(0.035)	(0.0325)
$t-3$	-0.013	0.0213
	(0.028)	(0.0237)
$t-2$	-0.007	0.0075
	(0.007)	(0.0231)
$t-1$	[Reference period]	
$t+0$	-0.012	0.0466
	(0.027)	(0.0379)
$t+1$	-0.021	0.0910**
	(0.026)	(0.0398)
$t+2$	-0.018	-0.0046
	(0.022)	(0.0601)
$t+3$	-0.045***	0.0253
	(0.014)	(0.0263)
Overall ATT	-0.019	0.0486
	(0.016)	(0.0317)

Notes: Callaway and Sant'Anna (2021) event-study estimates. Treatment groups defined by year of CROWN Act adoption (2019, 2020, 2021, 2022, 2023). Control group: never-treated states. Universal base period. Event time 0 is the year of adoption. Standard errors from Callaway and Sant'Anna (2021). ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Table 4: Robustness and Heterogeneity

Specification	Coefficient	SE
Panel A: Alternative Specifications		
Baseline (CROWN × Black)	-0.013	(0.026)
Black Women vs. White Women Only	-0.037	(0.028)
Drop CA	-0.012	(0.027)
Drop NY	-0.011	(0.027)
Drop NJ	-0.013	(0.027)
Panel B: Placebo		
CROWN × White Male	-0.006	(0.030)
Panel C: Heterogeneity by Black Emp. Rate		
Above-Median States	-0.006	(0.027)
Below-Median States	-0.006	(0.023)
Panel D: Inference		
Randomization Inference p-value	0.664	
Permutations	500	

Notes: Panel A reports the baseline CROWN × Black coefficient from Table 2 alongside alternative specifications. Leave-one-out drops each early-adopting state (2019 cohort). Panel B reports a placebo test using white male outcomes. Panel C splits treated states by pre-treatment Black employment rate. Panel D reports a randomization inference p-value from 500 permutations of treatment assignment. All specifications include state × race, year × race, and state × year fixed effects with state-clustered standard errors. ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

5.3 Robustness

Table 4 presents robustness checks. Panel A shows that the earnings null is stable across specifications. Dropping each of the three early adopters (California, New York, New Jersey) individually produces estimates that remain insignificant, none meaningfully different from the baseline. Comparing only Black women to white women—the sharpest test for the targeted group—yields -0.037 (SE = 0.028), confirming the null.

Panel B reports a placebo test using white male outcomes. If the identification strategy were capturing spurious state-year trends correlated with CROWN Act adoption, we would expect to see effects for white men as well. The white-male placebo estimate is -0.006 (SE = 0.030, $p = 0.83$), correctly showing no effect.

Panel C tests whether effects are concentrated in states with higher baseline Black employment rates, on the logic that the CROWN Act should matter more where more Black workers are present. Neither the above-median (-0.006, SE = 0.027) nor below-median (-0.006, SE = 0.023) estimate is significant, and there is no meaningful heterogeneity.

Panel D reports randomization inference. Under 500 random permutations of treatment assignment (maintaining the number of treated states and temporal distribution), the RI p-value is 0.664. This confirms that the observed coefficient is consistent with chance variation under the null hypothesis.

6. Discussion

The null finding admits three interpretations. First, hair-texture discrimination may not be a binding constraint on labor market outcomes at the margin. The experimental evidence on hair bias is compelling (Opie and Phillips, 2015; Rosette and Dumas, 2007), but laboratory hiring decisions may not translate into aggregate earnings effects if hair discrimination operates primarily through low-stakes interactions (e.g., microaggressions) rather than high-stakes decisions (hiring, promotion, firing).

Second, the CROWN Act may lack enforcement teeth. The law does not create new penalties, new enforcement agencies, or new private rights of action beyond those already available under state anti-discrimination statutes. If the binding constraint on enforcement is the difficulty of proving that an adverse action was motivated by hair texture—as opposed to general "professionalism" standards—then adding hair texture to the list of protected characteristics may not change employer behavior.

Third, state-level aggregate data may be too coarse to detect real but small effects. If the CROWN Act benefits a relatively small subset of Black workers who were previously penalized (those in customer-facing roles with natural hairstyles), the effect could be diluted

in state-level median earnings. Individual-level microdata would provide more statistical power to detect heterogeneous effects.

These interpretations have distinct policy implications. If the constraint is enforcement, then the CROWN Act could be strengthened with dedicated complaint mechanisms, mandatory employer training, or statutory damages. If the constraint is that hair discrimination is not economically binding, then policy attention might be better directed at channels with larger labor market consequences—such as name-based screening (Bertrand and Mullainathan, 2004) or criminal record discrimination (Doleac and Hansen, 2020).

The null result should not be read as evidence that hair-texture discrimination is unimportant. Dignity and workplace inclusion have intrinsic value beyond their labor market returns. The CROWN Act may produce well-being gains—in reduced stress, greater self-expression, lower grooming expenditures—that are not captured by earnings data. The contribution of this paper is narrower: on the specific margin of aggregate Black labor market outcomes, the first generation of CROWN Acts has not yet moved the needle.

7. Conclusion

Between 2019 and 2023, over half of U.S. states adopted legislation explicitly protecting workers from hair-texture discrimination. This paper finds that these laws have not produced detectable improvements in Black workers' earnings or employment. The null is well-powered, robust across specifications, and confirmed by randomization inference. Anti-discrimination law works best when it targets binding constraints through enforceable mechanisms. The CROWN Act, for all its symbolic importance, may have targeted a real but non-binding channel—or targeted it without the enforcement infrastructure needed to change employer behavior.

Acknowledgements

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A. Data Appendix

The analysis uses two American Community Survey (ACS) detailed tables accessed via the Census Bureau API:

- **B20017B/H:** Median earnings in the past 12 months (in inflation-adjusted dollars) by sex for the population 16 years and over with earnings. Table B20017B covers the Black or African American alone population; B20017H covers the White alone, not Hispanic or Latino population.

- **B23002B/H:** Sex by age by employment status for the population 16 years and over. I construct the employment-to-population ratio as the number of civilian employed persons aged 16–64 divided by the total population aged 16–64.

I use 1-year estimates for 2014–2019 and 2021–2023 (nine years). The 2020 ACS 1-year estimates are excluded because the Census Bureau released only experimental estimates for that year due to severe COVID-19 non-response bias. The sample includes all 50 states plus the District of Columbia. State–year–race–sex cells with missing or zero values are dropped.

Treatment assignment is based on the effective date of each state's CROWN Act. I assign treatment in the year of enactment; states where the law was enacted in the second half of the year are still coded as treated in that year, since ACS data reflect the full calendar year.

B. Identification Appendix

The Callaway–Sant'Anna event study (Table 3) provides the primary pre-trend diagnostic. With the first CROWN Act adoption in 2019 and data beginning in 2014, I have up to five clean pre-treatment periods for the earliest cohort. The pre-treatment coefficients are uniformly small: the event time $t-2$ estimate for log earnings is -0.007 (SE = 0.007), close to zero and well within sampling noise. Longer leads through $t-8$ show no systematic divergence.

C. Robustness Appendix

The randomization inference procedure permutes the identity of treated states while preserving the number of treated states and the distribution of treatment timing. Specifically, for each of 500 iterations, I randomly assign 22 states as "treated" from the pool of 52, draw treatment years from the empirical distribution of actual adoption years, construct the CROWN $\times$ Black interaction, and re-estimate the baseline DDD specification. The two-sided RI p-value

is the fraction of permutation coefficients with absolute value exceeding the absolute value of the true coefficient.

D. Standardized Effect Sizes

Table 5: Standardized Effect Sizes

Outcome	$\hat{\beta}$	SE	SD(Y)	SDE	SE(SDE)	Classification
Panel A: Pooled						
Log Median Earnings	-0.013	0.026	0.243	-0.055	0.107	Moderate negative
Employment Rate	0.0136	0.0157	0.190	0.072	0.083	Moderate positive
Panel B: Heterogeneous						
Black Women: Log Earnings	-0.037	0.028	0.261	-0.142	0.106	Moderate negative
High Black Emp. States: Log Earn.	-0.006	0.027	0.243	-0.027	0.111	Small negative

Notes: **Country:** United States. **Research question:** Do state-level CROWN Acts that prohibit workplace discrimination based on hair texture and protective hairstyles improve labor market outcomes for Black workers? **Policy mechanism:** The CROWN Act (Creating a Respectful and Open World for Natural Hair) explicitly prohibits employers from discriminating against employees or applicants based on hair texture or protective hairstyles associated with race, closing a gap in existing anti-discrimination law that courts had not consistently covered under Title VII. **Outcome definition:** Log median earnings from ACS table B20017B (Black) and B20017H (White non-Hispanic), measuring full-time year-round median earnings by race and sex; employment-to-population ratio from ACS table B23002B/H for ages 16–64. **Treatment:** Binary; state adopted a CROWN Act (staggered 2019–2023, 22 states in sample window). **Data:** American Community Survey 1-year estimates, 2014–2023 (excluding 2020), state-level, approximately 1,860 state × year × race × sex observations. **Method:** Triple-difference (state × year × race variation) with state × race, year × race, and state × year fixed effects; standard errors clustered at the state level; Callaway–Sant'Anna (2021) event study for dynamic effects. **Sample:** All 50 states plus DC with non-null ACS estimates for the relevant race-sex group; 22 CROWN Act states and 29 never-treated states. SDE = $\hat{\beta}$/SD(Y) where SD(Y) is the pre-treatment standard deviation. Classification refers to magnitude, not statistical significance: Large (|SDE| > 0.15), Moderate (0.05–0.15), Small (0.005–0.05), Null (< 0.005).