World Journal of Educational Research
ISSN 2375-9771 (Print) ISSN 2333-5998 (Online)
Vol. 7, No. 3, 2020
www.scholink.org/ojs/index.php/wjer

Original Paper

Parental Education and Spanking of American Children: Blacks' Diminished Returns

Shervin Assari[1*]

[1] Department of Family Medicine, Charles R. Drew University, Los Angeles, CA 90059, USA

[*] Shervin Assari, Department of Family Medicine, Charles R. Drew University, Los Angeles, CA 90059, USA

Received: June 4, 2020 Accepted: June 25, 2020 Online Published: June 28, 2020

doi:10.22158/wjer.v7n3p19 URL: http://dx.doi.org/10.22158/wjer.v7n3p19

Abstract

Background: *Based on the Minorities' Diminished Returns (MDRs) framework, high socioeconomic status (SES) indicators such as parental education shows weaker protective effects against adverse experiences for Blacks than Whites. For example, Black children with highly educated parents report high levels of depression, anxiety, suicide, smoking, obesity, and chronic disease. Limited knowledge exists on MDRs of parental education on the child's exposure to spanking by the mother.* ***Aims:*** *Built on the MDRs framework, we tested the hypothesis of whether the effect of parental education on the child's exposure to spanking by the mother differs in Black and White families. We hypothesized that: 1) there is an inverse association between mothers' educational attainment and child spanking, and 2) the effect of mothers' educational attainment on mothers' spanking of the child is weaker for Black than White families.* ***Methods:*** *We used data from the Fragile Families and Child Well-being Study (FFCWS), a 9-year follow up study of a random sample of births in cities larger than 200,000 population. In this analysis, 2722 Black or White families were followed. The main predictor was parental educational attainment at birth. The outcomes were exposure to spanking at ages 3, 5, and 9.Logisticregression was used for data analysis.* ***Results:*** *Higher parental educational attainment at birth was inversely associated with the child's exposure to spanking by the mother among Whites, not Blacks. We also found a significant interaction between parental educational attainment at birth and race, suggesting that the associations between parental education and child exposure to spanking by the mother at ages3, 5, and 9were weaker for Black than White families.* ***Conclusions:*** *Diminished returns of parental educational attainment in terms of reducing children's exposure to trauma and stress may be a mechanism that contributes to racial health disparities, particularly poor health of children in highly educated Black families. That is a smaller protective effect of parental education on reducing undesired exposures for*

Black than White children may be one of the mechanisms that may explain why children develop worse than expected physical, mental, and behavioral health in high SES Black families. Not all health disparities are due to racial differences in SES, but some of them are also secondary to the diminishing returns of socioeconomic status indicators such as parental education for racial minorities. Research should study contextual, structural, family, and behavioral factors that reduce Black families' ability to mobilize their human capital and secure health outcomes for themselves and their children.

Keywords

African Americans, Blacks, parental health, socioeconomic status, socioeconomic education, discipline, child abuse, spanking, physical punishment

1. Introduction

High Socioeconomic Status (SES), particularly parental education, is a Strong social Determinant Of Health (SDOH) and human behaviors ("Poverty, low birth weight and brain size", 2017). Individuals with higher parental education show better health (Blumenshine, Egerter, Barclay, Cubbin, & Braveman, 2010). High parental education is also among the strongest indicators of SES and SDOH (Silvestrin et al., 2013) and shows protective effects against child abuse, child neglect, physical punishment, inappropriate or harsh parenting, and spanking (Afifi, Fortier, Sareen, & Taillieu, 2019; DeGarmo, Forgatch, & Martinez, 1999; Eamon, 2002; Grogan-Kaylor, 2004; McLeod, Kruttschnitt, & Dornfeld, 1994; Paschall, Ringwalt, & Flewelling, 2003; Straus & Mouradian, 1998; Straus, Sugarman, & Giles-Sims, 1997). In fact, these parental processes and behaviors may be one of the many mechanisms by which high SES parents raise children who are emotionally stable and physically healthy (Chuang, Ennett, Bauman, & Foshee, 2005; Mistry, Biesanz, Chien, Howes, & Benner, 2008; Odgers et al., 2012). Spanking is the most common type of physical punishment (Shawna J Lee, Altschul, & Gershoff, 2015), which is associated with a wide range of undesired behavioral and mental health outcomes (Gershoff & Grogan-Kaylor, 2016), such as antisocial behaviors and conduct disorder both in adolescence as well as adulthood (Gershoff, Ansari, Purtell, & Sexton, 2016; Gershoff, Lansford, Sexton, Davis-Kean, & Sameroff, 2012; Gromoske & Maguire-Jack, 2012; Ma, 2016; Ma, Grogan-Kaylor, & Klein, 2018; Julie Ma, Andrew Grogan-Kaylor, & Shawna, J. Lee, 2018; McLeod et al., 1994; Okuzono, Fujiwara, Kato, & Kawachi, 2017). There is also a large racial and SES gap in the use of physical discipline and spanking, with low SES and Black children experiencing far more spanking than high SES and White children (Altschul, Lee, & Gershoff, 2016; Berlin et al., 2009; Day, Peterson, & McCracken, 1998; Giles-Sims, Straus, & Sugarman, 1995; Shawna et al., 2015; MacMillan et al., 1999; Oscea et al., 2010).

There are, however, variations in the effects of SES and SDOH indicators depending on social context and demographic factors (Campbell et al., 2018). In other terms, the protective effects of SES and SDOH indicators such as parental education depend on race and place, suggesting a complex interplay between race, place, and resources on shaping populations' and individuals' health outcomes (Kothari et al., 2016). This pattern is also true for spanking and physical punishment (Buemi, 2009; Coley, Kull, &

Carrano, 2014; Vittrup & Holden, 2010). Research has shown that spanking may have different predictors and risk factors by race (Berlin et al., 2009).

A growing body of research has suggested that SES and SDOH indicators, such as parental educational attainment, maybe less protective for Black than White families (Assari, 2017; Shervin Assari, 2018a). For parents themselves, educational attainment better increases the exercise, diet, health, and job quality of Whites than Blacks (Shervin Assari, 2019a; S. Assari & M. Bazargan, 2019; S Assari & Lankarani, 2018; S. Assari, Preiser, & Kelly, 2018). These studies show interactions between race and SES which means variation in the protective effects of SES across contexts, subpopulations, and groups.

Most studies on racial inequalities in outcomes have focused on the racial gap in exposure to risk and protective factors (Perneger, Whelton, & Klag, 1995). For example, racial differences in spanking are attributed to racial differences in parenting, SES, or endorsement of spanking as an acceptable disciplinary behavior (Heffer & Kelley, 1987). Other groups have attributed the same inequalities to cultural differences between Blacks and Whites (Brown, Holden, & Ashraf, 2018; Dodge, McLoyd, & Lansford, 2005; Honig & Chung, 1989; Plessy, Long, & Kelley, 2018; Zegiob & Forehand, 1975). There is, however, another explanation, which is informed by Minorities' Diminished Returns (MDRs) (S. Assari, 2017; Shervin Assari, 2018a).

Although historically neglected, attention has been recently given to the contributions of MDRs as a source of racial and ethnic health disparities and inequalities in middle-class Black families, particularly in urban settings (Assari, 2017; Shervin Assari, 2018a). According to the MDRs framework, SES and SDOH indicators, particularly educational attainment, show weaker effects and generate fewer positive health outcomes for Black than White families (S. Assari, 2017; Shervin Assari, 2018a). As a result of these MDRs, we observe worse than expected health outcomes for children from highly educated Black families, a pattern not seen for White families (B. M. Assari S, S. Assari, & Mistry, 2018; S. Assari, H. T. Schatten et al., 2019). For example, children from highly educated parents show less aggression, tobacco use, obesity, chronic disease, and poor school performance if they are White, but not if they are Black (Shervin Assari, Boyce, Bazargan, & Caldwell, 2020; Shervin Assari, Boyce, Bazargan, Caldwell, & Zimmerman, 2020; Shervin Assari, Boyce, Bazargan, Mincy, & Caldwell, 2019; Shervin Assari, Shanika Boyce, Cleopatra H. Caldwell, & Mohsen Bazargan, 2020; S. Assari, S. Boyce, C. H. Caldwell, & M. Bazargan, 2020; S. Assari, Caldwell, & Bazargan, 2019; M. R. Assari S, Caldwell CH, Bazargan M. ; Boyce, Bazargan, Caldwell, Zimmerman, & Assari, 2020; Shanika Boyce, 2020).

While parental education generates fewer health outcomes across domains for Black than White individuals (S. Assari, 2018f; Assari S, 2019), we are unaware of any longitudinal studies that show differential effects of parental educational attainment (e.g., MDRs) on the child exposure to spanking by the mother. Recent research has shown that parental education shows a weaker than expected protective effect on childhood trauma for Black than White families (Shervin Assari, 2020). However, this study was focused on all types of stressors and did not test if harsh parenting, physical punishment, disciplinary behavior, or spanking were different across race by education groups. Thus, any studies on MDRs of

parental education on child exposure to spanking by the mother would be a unique contribution to the literature.

1.1 Aims

Built on the MDRs literature (S. Assari, 2017; Shervin Assari, 2018a), and built on our past work that shows parental education has a weaker effect on reducing childhood trauma and stress for Black than White families (Assari & Lankarani, 2018), we conducted this study with two aims in mind: First, to test the effect of parental education on the child's exposure to spanking by the mother, overall. Second, to compare the protective effect of parental educational attainment on the child's exposure to spanking by the mother between Black and White families. We hypothesized an inverse association between parental educational attainment and children's exposure to spanking by the mother (hypothesis 1). We also expected a weaker protective effect of parental educational attainment on children's exposure to spanking by the mother for Black than White families (hypothesis 2). If our hypothesis 2 gets supported, then Black children would have high exposure to spanking, regardless of their parental education. This would be in contrast to White children whose exposure to spanking would go down as maternal education goes up.

2. Methods

2.1 Design and Setting

This longitudinal study used nine years of follow up of a national urban sample of newborns. The Fragile Families and Child Wellbeing Study (FFCWS) was conducted from 1998 to 2016. The FFCWS is an ongoing longitudinal study. However, the most current wave of data collection occurred in the year 2016. The FFCWS has followed racially diverse and economically fragile families from the birth of their new borns to when the child is 15 years old. A full description of the FFCW sampling, design, and methodology of the study are available elsewhere (Waldfogel, Craigie, & Brooks-Gunn, 2010). Here we provide a brief description of the FFCWS sample, sampling, and methods.

2.2 FFCWS Sample, Sampling, and Analytical Sample

The FFCWS recruited newborns that were from economically challenged families. These births were selected from 20 US cities in which the population was 200,000 or more people. The FFCWS has used a random sample of urban families. This, however, included an oversampling of non-married and Black and Hispanic couples (Waldfogel et al., 2010). Most births in the FFCWS were non-marital, low SES, racially, and ethnic minorities. As a result, the sample overall reflects the economically challenged and fragile families. Despite a random sample, this national sample is not representative of the US general population. The baseline sample size of the FFCWS was composed of 4,898 families. In the current analysis, we only included 2722 individuals who were followed from birth to age 3, 5, and 9, and had complete data on race, maternal education, and at least one spanking measure. The FFCWS data on 15th year was available. However, age 15 did not have data on spanking.

2.3 Study Constructs

2.3.1 Predictor Variables

The main independent variable *was* parental educational attainment at the time of the birth of the newborn (wave 1). Parental educational attainment was a four-level variable: 1) "less than high school", 2) "high school completed", 3) "some college education", and 4) "college completed". This variable was treated as a categorical variable with "less than high school" as the reference level.

2.3.2 Covariate

Child gender, parental age at childbirth, family marital status, and poverty status at baseline were the study covariates. Child gender was a dichotomous variable: 1 for female, and 0 for male. Parental age at birth was a continuous measure and reported by the mother. Poverty status at birth was calculated based on the household income level and household size. Family structure at birth was a dichotomous variable: married=1, non-married=0.

2.3.3 Dependent Variables

Our outcomes were the child's exposure to spanking by the mother measured using the following single item in years 3, 5, and 9. Mother was asked, "Have you spanked your child in the past month?" (Lee, Grogan-Kaylor, & Berger, 2014; Ma, Grogan-Kaylor, & Lee, 2018; Mackenzie, Nicklas, Brooks-Gunn, & Waldfogel, 2011, 2014; MacKenzie, Nicklas, Waldfogel, & Brooks-Gunn, 2013; Ragavan, Griffith, Bair-Merritt, Cabral, & Kistin, 2019; Taylor, Lee, Guterman, & Rice, 2010; Taylor, Manganello, Lee, & Rice, 2010; Ward, Lee, Limb, & Grogan-Kaylor, 2019). Responses were yes, no, refuse to answer, or do not know. This variable was coded as 1 for presence and 0 for the absence of spanking. These were treated as three distinct and a combined binary variable.

2.3.4 Moderator

Race, the moderator, was self-identified by the mother. This variable was operational zed as a dichotomous variable: Blacks=1, Whites=0. All participants were non-Hispanic.

2.4 Statistical Analysis

The SPSS 22.0 (SPSS Inc., Chicago, IL, USA) was used for the data analysis. To describe the sample, we applied univariate analyses and reported frequency (%) and mean (standard deviation) for categorical and continuous measures. For the multivariable analysis, we used a series of nested Logistic regression models. First, we ran models in the overall sample, and then we ran models specific to race. For aim 1, we ran Model 1. For aim 2, we ran three other models. In these models, the child's exposure to spanking by the mother at age 3, 5, 9, and all were the outcomes, and parental education at birth was the independent variable (categorical variable). *Model 1* only included the main effects. *Model 2* included three race by parental education interaction terms. *Model 3* and *Model 4* tested the same models in White and Black families. Odds Ratio (OR), 95% confidence intervals (95% CI), and p-values were reported.

2.5 Ethics

The FFCWS study protocol and ethics were approved by the Institutional Review Board (IRB) of Princeton University. Mothers (and fathers, if present) provided written informed consent. Children provided assent at age 15. All the FFCWS data were collected, stored, and analyzed anonymously. Respondents received some financial compensation for their participation.

3. Results

3.1 Descriptive Statistics

This study included 2722 families who were either Black (n = 2027) or White (n = 746). All these families were followed from birth to the time that their child was 15 years old. Thus, all these families had data on demographics, SES at wave 1, as well as children outcomes (child exposure to spank by the mother) at ages 3, 5, and 9, and overall.

Table 1 shows a summary of the descriptive statistics of the sample overall and by race/ethnicity. Most White and Black families were composed of married and unmarried couples. Parental age, educational attainment, and family income were all significantly lower in Black than White families. Black children had higher odds of exposure to spanking by the mother at ages 3, 5, and 9 than White children.

Table 1. Descriptive Overall and by Race/Ethnicity (n = 2722)

	All		White		Black	
	n	%	n	%	n	%
Race						
White	746	26.9	746	100.0		
Black	2027	73.1			2027	100.0
Gender						
Male	1468	52.9	395	52.9	1073	52.9
Female	1305	47.1	351	47.1	954	47.1
Marital Status*,[a]						
Non-married	2087	75.3	316	42.4	1771	87.4
Married	686	24.7	430	57.6	256	12.6
Poverty*,[a]						
Not Poor	1800	64.9	670	89.8	1130	55.7
Poor	973	35.1	76	10.2	897	44.3
Education*,[a]						
Less than high school	779	28.1	107	14.3	672	33.2
High school or equivalent degree	911	32.9	175	23.5	736	36.3
Some college education	720	26.0	207	27.7	513	25.3

College degree	363	13.1	257	34.5	106	5.2
Spanking 3th Year*,[a]						
No	1812	69.1	602	83.3	1210	63.7
Yes	811	30.9	121	16.7	690	36.3
Spanking 5th year*,[a]						
No	1095	43.3	324	46.5	771	42.1
Yes	1432	56.7	373	53.5	1059	57.9
Spanking 9th Year*,[a]						
No	1239	49.7	378	57.3	861	46.9
Yes	1255	50.3	282	42.7	973	53.1
Spanking-Any*,[a]						
No	875	31.6	302	40.5	573	28.3
Yes	1898	68.4	444	59.5	1454	71.7
	Mean	**SD**	**Mean**	**SD**	**Mean**	**SD**
Maternal Age at Birth*,[b]	25.42	6.19	27.89	6.62	24.52	5.77

* $p < 0.05$ (Blacks compared to Whites); [a] Pearson Chi-square test; [b] Independent sample t-test.

Tables 2 to 5 show the main results of four logistic regressions for each outcome. These models were estimated in the overall sample and then in race groups to test the effects of parental education on the child's exposure to spanking by the mother at ages 3, 5, 9, and overall. *Model 1*, which did not include our interaction term, showed that high parental education was not associated with the child's exposure to spanking by the mother in the overall sample. *Model 2*, which included an interaction term between race and mother's education, showed a significant interaction between race and parental education level, suggesting a larger protective effect of high parental education on the child's exposure to spanking by the mother, at all ages, for Whites than Blacks. These tables also present the statistics for two other logistic regressions that were performed to assess the association between parental education and the child's exposure to spanking by the mother at ages 3, 5, 9, and any time for racial groups. *Model 3* (Whites) and *Model 4* (Blacks) always showed an inverse and positive association between parental education and the child's exposure to spanking by the mother in White and Black families, respectively. This pattern suggested that while for White families, high maternal education was protective, for Black families, high maternal education was associated with higher odds of spanking by the mother. While some nuances existed, this pattern was mainly consistent across outcomes.

Table 2. Logistic Regression Models with Child Exposure to Spanking by the Mother at Ages 3 to 9 (any) as the Outcome in the Overall Sample and by Race

	Model 1 (Main Effects)				Model 2 (M1 + Interaction)				Model 2 (Whites)				Model 4 (Blacks)			
	OR	95% CI		p	OR	95 %		p	OR	95% CI		p	OR	95% CI		P
Race (Black)	1.57	1.28	1.94	0.000	0.75	0.47	1.21	0.238								
Gender (Female)	0.81	0.69	0.95	0.010	0.80	0.68	0.94	0.007	0.86	0.63	1.16	0.309	0.78	0.64	0.94	0.011
Married family	1.00	0.78	1.28	0.999	1.04	0.81	1.34	0.753	1.15	0.77	1.72	0.503	0.96	0.70	1.32	0.785
Poor Family	0.86	0.71	1.05	0.139	0.90	0.73	1.09	0.279	0.63	0.37	1.08	0.096	0.94	0.76	1.17	0.583
Mother Age at Childbirth	0.96	0.95	0.98	0.000	0.96	0.95	0.98	0.000	0.96	0.93	0.99	0.005	0.96	0.95	0.98	0.000
Mother Education				0.108				0.000				0.003				0.004
High School Graduate	1.22	0.98	1.51	0.081	0.57	0.32	0.95	0.030	0.52	0.30	0.90	0.019	1.43	1.12	1.82	0.004
Some college	1.26	0.98	1.61	0.066	0.75	0.44	1.28	0.295	0.68	0.38	1.19	0.175	1.37	1.04	1.81	0.027
College Graduate	1.00	0.71	1.41	0.990	0.42	0.24	0.73	0.002	0.36	0.20	0.67	0.001	2.21	1.33	3.68	0.003
Mother Education x Race								0.000								
High School Graduate x Race					2.55	1.43	4.57	0.002								
Some college x					1.77	0.98	3.17	0.057								

Race												
College Graduate x Race				5.04	2.48	10.24	0.000					
Constant	4.41		0.000	8.08		0.000	9.19		0.000	5.90		0.000
	1		0	8		0	9		0	0		0

Overall models are statistically significant; Outcome: child exposure to spanking by the mother; Confidence Interval (CI).

Table 3. Logistic Regression Models with Child Exposure to Spanking by the Mother at Age 3 as the Outcome in the Overall Sample and by Race

	Model 1 (Main Effects)				Model 2 (M1 + Interaction)				Model 2 (Whites)				Model 4 (Blacks)			
	OR	95% CI		p	OR	95% CI		p	OR	95% CI		p	OR	95% CI		P
Race (Black)	2.48	1.95	3.17	0.000	0.87	0.56	1.36	0.547								
Gender (Female)	0.86	0.73	1.02	0.085	0.85	0.72	1.01	0.073	0.93	0.62	1.40	0.732	0.84	0.70	1.02	0.077
Married family	0.87	0.67	1.15	0.328	0.94	0.71	1.23	0.636	1.18	0.70	2.02	0.533	0.83	0.60	1.15	0.261
Poor Family	0.84	0.69	1.02	0.078	0.88	0.72	1.07	0.199	0.64	0.32	1.28	0.212	0.90	0.73	1.11	0.337
Mother Age at Childbirth	0.96	0.95	0.98	0.000	0.97	0.95	0.98	0.000	0.98	0.94	1.02	0.356	0.96	0.94	0.98	0.000
Mother Education				0.164				0.000				0.000				0.023
High School Graduate	1.14	0.91	1.41	0.248	0.41	0.24	0.72	0.002	0.37	0.21	0.65	0.001	1.35	1.07	1.70	0.013
Some college	0.88	0.68	1.13	0.308	0.26	0.14	0.47	0.000	0.20	0.11	0.39	0.000	1.12	0.85	1.47	0.428
College Graduate	0.96	0.65	1.42	0.834	0.26	0.14	0.49	0.000	0.17	0.08	0.36	0.000	1.76	1.08	2.86	0.023

Mother Education x Race							0.000							
High School Graduate x Race				3.20	1.76	5.83	0.000							
Some college x Race				4.14	2.18	7.86	0.000							
College Graduate x Race				6.05	2.92	12.52	0.000							
Constant	0.65		0.067	1.514			0.121	1.017		0.890	1.416			0.107

Overall models are statistically significant; Outcome**:** child exposure to spanking by the mother; Confidence Interval (CI).

Table 4. Logistic Regression Models with Child Exposure to Spanking by the Mother at Age 5 as the Outcome in the Overall Sample and by Race

	Model 1 (Main Effects)			Model 2 (M1 + Interaction)			Model 2 (Whites)			Model 4 (Blacks)		
	OR	95% CI	P	OR	95% CI	p	OR	95% CI	p	OR	95% CI	P
Race (Black)	1.17	0.95 1.44	0.128	0.60	0.38 0.96	0.031						
Gender (Female)	0.89	0.76 1.04	0.154	0.88	0.75 1.04	0.125	0.92	0.73 1.15	0.968	0.84	0.70 1.01	0.083
Married family	1.16	0.91 1.48	0.231	1.22	0.95 1.56	0.114	1.14	0.75 1.72	0.542	1.26	0.92 1.73	0.185
Poor Family	0.89	0.74 1.08	0.230	0.93	0.77 1.13	0.458	0.52	0.30 0.91	0.022	1.00	0.82 1.23	0.982
Mother Age at Childbirth	0.97	0.96 0.99	0.001	0.98	0.96 0.99	0.001	0.96	0.93 0.99	0.006	0.98	0.96 1.01	0.021
Mother Education x Race			0.135			0.000			0.025			0.101

Education				5				3				4				0
High School Graduate	1.05	0.85	1.30	0.64	0.57	0.34	0.97	0.03	0.55	0.32	0.96	0.03	1.15	0.92	1.45	0.19
Some college	1.22	0.96	1.55	0.10	0.69	0.41	1.17	0.16	0.69	0.39	1.21	0.19	1.34	1.02	1.75	0.03
College Graduate	0.90	0.64	1.25	0.52	0.40	0.23	0.68	0.00	0.43	0.23	0.79	0.00	1.63	1.00	2.67	0.04
Mother Education x Race								0.00								
High School Graduate x Race					2.03	1.15	3.61	0.01								
Some college x Race					1.93	1.08	3.43	0.02								
College Graduate x Race					4.17	2.12	8.19	0.00								
Constant	2.25			0.00	3.85			0.00	6.37			0.00	1.99			0.00
	5			0	5			0	7			0	9			2

Overall models are statistically significant; Outcome**:** child exposure to spanking by the mother; Confidence Interval (CI).

Table 5. Logistic Regression Models with Child Exposure to Spanking by the Mother at Age 9 as the Outcome in the Overall Sample and by Race

	Model 1 (Main Effects)			Model 2 (M1 + Interaction)			Model 2 (Whites)			Model 4 (Blacks)		
	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p	OR	95% CI	p
Race (Black)	1.41	1.14	0.00	0.78	0.49	0.28						
		1.74	2		1.23	4						
Gender (Female)	0.77	0.66	0.00	0.76	0.65	0.00	0.66	0.48	0.01	0.81	0.67	0.02
		0.91	2		0.90	1		0.91	0		0.98	6

Married family	1.11	0.87	1.42	0.397	1.15	0.90	1.48	0.260	1.33	0.86	2.06	0.196	1.05	0.77	1.42	0.765
Poor Family	0.90	0.74	1.08	0.260	0.93	0.77	1.12	0.424	1.08	0.62	1.88	0.792	0.91	0.74	1.11	0.347
Mother Age at Childbirth	0.97	0.95	0.98	0.000	0.97	0.95	0.98	0.000	0.98	0.95	1.01	0.229	0.96	0.94	0.98	0.000
Mother Education				0.011				0.004				0.001				0.018
High School Graduate	1.20	0.97	1.49	0.087	0.66	0.39	1.11	0.119	0.63	0.37	1.08	0.093	1.35	1.07	1.70	0.010
Some college	1.35	1.06	1.71	0.014	0.86	0.51	1.45	0.570	0.77	0.44	1.35	0.365	1.46	1.12	1.91	0.005
College Graduate	0.91	0.65	1.28	0.593	0.44	0.25	0.75	0.003	0.35	0.18	0.65	0.001	1.61	1.00	2.60	0.049
Mother Education x Race								0.003								
High School Graduate x Race					2.03	1.14	3.60	0.016								
Some college x Race					1.66	0.93	2.94	0.084								
College Graduate x Race					3.43	1.76	6.68	0.000								
Constant	1.89			0.003	3.06			0.000	2.23			0.054	2.65			0.000

Overall models are statistically significant; Outcome**:** child exposure to spanking by the mother; Confidence Interval (CI)

4. Discussion

There were three findings: (a) in the pooled sample, parental education and the child's exposure to spanking by the mother at ages 3, 5, and 9, as well as overall were not correlated, (b) high parental education reduced the child's exposure to spanking by the mother at ages 3, 5, 9, and overall, for White but not Black families, and (c) for Black youth, high parental education was associated with an increased, rather than reduced, odds of child spanking across all the measures.

We found that while highly educated White mothers are less likely to spank their child at ages 3, 5, 9, and overall, Black children are at high risk of being exposed to spanking by their mothers, particularly when their maternal education is high. That is, highly educated Black families use spanking against their children, and this pattern is stable over time. For White families, however, higher maternal education means a lower risk of spanking.

This pattern is an indicator of MDRs of parental education on the child's exposure to spanking by the mother and is similar to what we have shown before on MDRs of parental education on the exposure of the child to trauma. In a recent analysis of data from 4696 NHW or NHB American 8-11-year-old children from the ABCD Study, parental educational attainment and family income were measured. Main outcomes were exposure to 1 or 2+ childhood traumas. Authors applied polynomial regression and observed that high parental education and family income both had protective effects on childhood trauma. Although children from high income and highly educated families were less likely to be exposed to childhood trauma, race showed significant interactions with both parental education and family income, that was indicative of the systematically weaker protective effect of parental education and family income on reducing exposure to trauma of Black than White children. Similarly, race-specific models showed that parental education and family income reduce exposure to childhood trauma for White but not Black children. The result was indicative of the prevalence of high stress of Black children regardless of family SES (Shervin Assari, 2020).

Our findings are also supported by other studies. MDRs of parental education and household income are shown for impulsivity (Assari, Caldwell, & Mincy, 2018a), school achievement (Assari, 2019), school bonding (Assari, 2019b), school achievement (Assari, 2019; Assari & Caldwell, 2019b), aggression (Assari et al., 2019), and tobacco use (Assari, Caldwell, & Bazargan, n.d.). Similarly, Black kids from high SES families remain at high risk of obesity (Assari, Thomas, Caldwell, & Mincy, 2018), anxiety (Assari, Caldwell, & Zimmerman, 2018), depression (Assari, 2018e), as well as chronic diseases (Assari, 2018a) such as ADHD (Assari & Caldwell, 2019a), and asthma (Assari & Moghani Lankarani, 2018a). That is, Black children and children are not much protected by their family SES, which is the essence of the MDRs.

Previous research has attributed MDRs to discrimination (Assari, 2018c; Assari & Moghani Lankarani, 2018b), neighborhood quality (Shervin et al., 2020), labor market discrimination (Preiser et al., 2018), and health behaviors (Shervin, 2019a). The patterns reported here may propose a behavioral explanation for why MDRs exist for both children and adults. Our study suggests that MDRs that are commonly

observed in adults can be traced back to childhood (Assari & Moghani Lankarani, 2018a), adolescence (Assari, Caldwell, & Mincy, 2018a; Assari, Caldwell, & Mincy, 2018b; Assari et al., 2018), and even at birth. As a result of such an unequal start of the life-course, family SES and parental education do not equally translate to health outcomes for Blacks and Whites over the life-course.

Many mechanisms and social processes can explain MDRs (Assari, 2017; Shervin Assari, 2018a). Due to structural and environmental factors, high SES Black families experience high levels of adversity, stress, and prejudice (Assari, 2017; Shervin Assari, 2018a). Highly educated Black people work in worse jobs than their highly educated White counterparts (B. M. Assari S). For example, highly educated ethnic minorities are more likely to be obese (Assari, 2018d; Assari et al., 2018), have a poor diet (Assari & Lankarani, 2018), have a poor exercise routine (Shervin Assari, 2019a), smoke cigarettes (Assari & Mistry, 2018), drink alcohol (Assari, Farokhnia, & Mistry, 2019), be depressed (Assari, 2018e), and have multiple chronic diseases (Assari & Moghani Lankarani, 2018a).

Another mechanism behind MDRs is the higher psychosocial tax that Blacks pay for upward social mobility (S. Assari, 2018g). Blacks report high levels of stress at all mobility statuses. Simultaneously, highly educated Blacks report more stress associated with race and discrimination (Assari, 2018c). Blacks and Whites with the same education do not have similar wealth, which would have operated as a buffer and protect Blacks if life conditions became out of hand (Oliver & Shapiro, 2013; Oliver & Shapiro, 1999). Education also does not have the very same effects on generating income and bringing the Black family out of poverty (Shervin Assari, 2018b).

It is previously shown that context and social group membership both alter causes and consequences of behaviors and health outcomes (Assari, 2014a; S. Assari & Burgard, 2015), mental health (S. Assari, Lankarani, & Lankarani, 2013), and their inter-relations (Shervin Assari, 2014; S. Assari, 2014b; S. Assari, Moazen-Zadeh, Lankarani, & Micol-Foster, 2016). Stress is shown to have very different health implications for groups by race and sex (S. Assari & Lankarani, 2016b; S. Assari, Moghani Lankarani, Caldwell, & Zimmerman, 2016; Shervin Assari, Smith, Caldwell, & Zimmerman, 2015). The same can be said for discrimination (S. Assari, Moazen-Zadeh, Caldwell, & Zimmerman, 2017). Similarly, SES indicators (Assari, 2018h) such as poverty status (S. Assari & Moghani Lankarani, 2018a), education (S. Assari, M. Farokhnia et al., 2019), income (S. Assari, 2018a; S. Assari, Lapeyrouse, & Neighbors, 2018), and family structure (Assari, Caldwell, & Zimmerman, 2018) differently influence health, behaviors, and well-being of groups. Similarly, the complex interplays between social, behavioral, and health factors also depend on social group membership (Assari, 2018b; Assari & Lankarani, 2016a). These general patterns apply to children and adults (S. Assari, 2018d, 2018e; Shervin Assari & Hani, 2018).

The results may be due to a contrasting view of the effects of discipline across ethnic groups. A study by Lansford et al discussed that different ethnic groups have adapted different parenting techniques based on cultural context, assimilation experiences, and socialization goals. Black children were found to have fewer externalizing behavior problems compared to White children after experiencing physical discipline in the first five years of life. This was attributed to Black children perceiving physical

discipline as carried out with their best interest at heart compared to the scary experience and perception that parents were out of control by White children (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004).

This study and other investigations propose that MDRs are not specific to any specific health outcomes. This observation suggests that upstream socialization processes that accompany race, also called racism, are responsible for a systemic difference between Whites and Blacks in their ability to gain health and well-being from educational attainment and other resources (Assari, 2017; Shervin Assari, 2018a)**.** These patterns may not be specific to race, as they are also shown for ethnicity (Shervin Assari, 2019b; S. Assari, M. Farokhnia et al., 2019; Shervin & Ritesh, 2019) and sexual orientation (Assari, 2019a; Shervin Assari & Mohsen Bazargan, 2019). Thus, it is not just racism, but any form of marginalization that reduces health gain that follows SES.

Various researchers have documented MDRs. Farmer and Ferraro published on MDRs of education on self-rated health (Farmer & Ferraro, 2005). In this study, Whites gained more than Blacks from an increase in their educational attainment. Shapiro and Oliver have published on the inequalities in wealth distribution as a consequence of unfair social policies such as Jim Crow and redlining (Oliver & Shapiro, 2013; Oliver & Shapiro, 1999). Hamilton and Darity have conducted several studies documenting the enormous wealth gap in the United States (Hamilton & Darity Jr, 2009). Other scholars have also published on MDRs (Fuller-Rowell, Curtis, Doan, & Coe, 2015). Hudson et al. have shown a reduced gain of SES in the lives of Blacks (Hudson, Bullard, et al., 2012; Hudson, Neighbors, Geronimus, & Jackson, 2012, 2016). Wilson, Thorpe, and LaVeist have shown that income reduces discrimination for Whites and Blacks (Wilson, Thorpe, & LaVeist, 2017) differently. These are all in line with the Navarro's argument that living conditions and health are not a function of race or class (SES) but race and class (Navarro, 1989, 1990, 1991).

4.1 Implications

Our findings propose policy solutions that can help reduce health disparities in the United States. Previous policies have mainly tried to reduce inequalities in access to resources and have assumed that the elimination of inequalities in access would result in the elimination of inequalities in outcomes. Our findings, however, suggest that given the MDRs, some of the racial and ethnic inequalities are not because of unequal access but the systemic disadvantage of Blacks and other ethnic groups in society. Without addressing MDRs, solely enhancing access to SES resources would not be enough for the elimination of health disparities. Thus, MDRs research may contribute to the advancement of policies to reduce health disparities (Bailey et al., 2017; Butler & Rodgers, 2019; Gee & Ford, 2011; Louis, Menard, & Gee, 2015; Rodriguez, Bound, & Geronimus, 2014).

4.2 Limitations

The study has a few limitations. First, we did not have a balanced sample size in our Black and White groups. The sample was random, but not generalizable to the US. This is because the FFCWS has predominantly recruited economically fragile participants from large cities. The FFCWS cohort, as its

title suggests, reflects the economically challenged and fragile families. Various confounders such as parental warmth, acceptability of spanking, other parental behaviors, and stress were not measured. Another limitation was a single-item measure for our spanking variable. We also did not include data on the frequency or severity of spanking. In addition, this study could not match Black and White participants for SES. Whites still have higher levels of wealth and income, and live in better neighborhoods, even when parental education and poverty status are controlled.

There are also other reasons for a need in cation. We do not attribute high level of spanking to poor culture of Blacks. Thus, some individuals may perceive the findings as quite controversial. There are also some methodological issues. One is that there was a large difference in level of education between Blacks and Whites, which may have biased the results. There are also some potential confounders which were not corrected for, such as mental health in parents, which may increase the risk of spanking. The assessment of the spanking was also based on single items. The results may have also been affected by high social desirability of low educated Black sample, compared to the higher educated White sample.

5. Conclusions

In a national sample of US urban areas, Black and White families widely differ in how their parental education reduces their risk of being spank by the mother. That means, we observe a high risk of spanking, which is consistent over time, across all education levels of Black families. For Whites families, however, the risk of spanking is a function of parental educational attainment. That is, not only are White children protected overall, their risk goes down even further as their parents receive higher education. In contrast, Black children, however, are commonly spanked by their mothers, regardless of the educational level of the mother. These are generally described as a pattern called MDRs.

Author Contributions

SA conceptualized this paper, analyzed the data, wrote the first draft, and revised the paper. SB and MB contributed to the conceptual model and revised the manuscript. All authors approved the final draft.

Funding

Assari and Bazargan are supported by the NIH awards5S21MD000103, CA201415-02, D084526-03, 4MD008149, MD007610, 2U54MD007598, and TR001627. The FFCWS was supported by the following NIH grants: numbers R01HD36916, R01HD39135, and R01HD40421.

Conflicts of Interest

None.

References

Afifi, T. O., Fortier, J., Sareen, J., & Taillieu, T. (2019). Associations of harsh physical punishment and child maltreatment in childhood with antisocial behaviors in adulthood. *JAMA Network Open*, *2*(1). https://doi.org/10.1001/jamanetworkopen.2018.7374

Altschul, I., Lee, S. J., & Gershoff, E. T. (2016). Hugs, not hits: Warmth and spanking as predictors of child social competence. *Journal of Marriage and Family*, *78*(3), 695-714. https://doi.org/10.1111/jomf.12306

Assari S, B. M. (n.d.). Unequal Effects of Educational Attainment on Workplace Exposure to Second-Hand Smoke by Race and Ethnicity; Minorities' Diminished Returns in the National Health Interview Survey (NHIS). *J Med Res Innov*., *3*(2), e000179. https://doi.org/10.32892/jmri.179

Assari S. (2019). Parental Educational Attainment and Academic Performance of American College Students; Blacks' Diminished Returns. *Journal of Health Economics and Development*, *1*(1), 21-31. Retrieved from http://www.hedjournal.com/article_88998_0ea5f9591eeaa2aee5c592ea962a7541.pdf

Assari, S. M. R., & Caldwell, C. H. (n.d.). Bazargan M. Protective Effects of Parental Education Against Youth Cigarette Smoking: Diminished Returns of Blacks and Hispanics. *Adolesc Health Med Ther*, (11), 63-71. https://doi.org/10.2147/AHMT.S238441

Assari, S. (2014). Association Between Obesity and Depression Among American Blacks: Role of Ethnicity and Gender. *Journal of Racial and Ethnic Health Disparities*, *1*(1), 36-44. https://doi.org/10.1007/s40615-014-0007-5

Assari, S. (2014a). Chronic Medical Conditions and Major Depressive Disorder: Differential Role of Positive Religious Coping among African Americans, Caribbean Blacks and Non-Hispanic Whites. *Int J Prev Med*, *5*(4), 405-413. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24829727

Assari, S. (2014b). The link between mental health and obesity: Role of individual and contextual factors. *Int J Prev Med*, *5*(3), 247-249. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24829706

Assari, S. (2017). Unequal Gain of Equal Resources across Racial Groups. *Int J Health Policy Manag*, *7*(1), 1-9. https://doi.org/10.15171/ijhpm.2017.90

Assari, S. (2018a). Health Disparities due to Diminished Return among Black Americans: Public Policy Solutions. *Social Issues and Policy Review*, *12*(1), 112-145. https://doi.org/10.1111/sipr.12042

Assari, S. (2018a). The Benefits of Higher Income in Protecting against Chronic Medical Conditions Are Smaller for African Americans than Whites. *Healthcare (Basel)*, *6*(1). https://doi.org/10.3390/healthcare6010002

Assari, S. (2018b). Blacks' Diminished Return of Education Attainment on Subjective Health; Mediating Effect of Income. *Brain Sci*, *8*(9). https://doi.org/10.3390/brainsci8090176

Assari, S. (2018b). Parental Education Better Helps White than Black Families Escape Poverty: National Survey of Children's Health. *Economies*, *6*(2), 30. https://doi.org/10.3390/economies6020030

Assari, S. (2018c). Does School Racial Composition Explain Why High Income Black Youth Perceive More Discrimination? A Gender Analysis. *Brain Sci*, *8*(8). https://doi.org/10.3390/brainsci8080140

Assari, S. (2018d). Family Income Reduces Risk of Obesity for White but Not Black Children. *Children (Basel)*, *5*(6). https://doi.org/10.3390/children5060073

Assari, S. (2018e). High Income Protects Whites but Not African Americans against Risk of Depression. *Healthcare (Basel)*, *6*(2). https://doi.org/10.3390/healthcare6020037

Assari, S. (2018f). Parental Educational Attainment and Mental Well-Being of College Students; Diminished Returns of Blacks. *Brain Sci*, *8*(11). https://doi.org/10.3390/brainsci8110193

Assari, S. (2018g). Race, Intergenerational Social Mobility and Stressful Life Events. *Behav Sci(Basel)*, *8*(10). https://doi.org/10.3390/bs8100086

Assari, S. (2018h). Socioeconomic Status and Self-Rated Oral Health; Diminished Return among Hispanic Whites. *Dent J (Basel)*, *6*(2). https://doi.org/10.3390/dj6020011

Assari, S. (2019a). Education Attainment and Obesity Differential Returns Based on Sexual Orientation. *Behav Sci (Basel)*, *9*(2). https://doi.org/10.3390/bs9020016

Assari, S. (2019a). Educational Attainment and Exercise Frequency in American Women; Blacks' Diminished Returns. *Women's Health Bulletin*, *6*(3), e87413. https://doi.org/10.5812/whb.87413

Assari, S. (2019b). Family Socioeconomic Position at Birth and School Bonding at Age 15; Blacks' Diminished Returns. *Behav Sci (Basel)*, *9*(3). https://doi.org/10.3390/bs9030026

Assari, S. (2019b). Socioeconomic Determinants of Systolic Blood Pressure; Minorities' Diminished Returns. *Journal of Health Economics and Development*, *1*(1), 1-11. Retrieved from http://www.hedjournal.com/article_88938_d0f03c9e2607bdaeee1aa93938267b33.pdf

Assari, S. (2020). Family Socioeconomic Status and Exposure to Childhood Trauma: Racial Differences. *Children*, *7*(6), 57. https://doi.org/10.3390/children7060057

Assari, S., & Bazargan, M. (2019). Educational Attainment and Subjective Health and Well-Being; Diminished Returns of Lesbian, Gay, and Bisexual Individuals. *Behavioral Sciences*, *9*(9), 90. https://doi.org/10.3390/bs9090090

Assari, S., & Bazargan, M. (2019). Unequal Effects of Educational Attainment on Workplace Exposure to Second-Hand Smoke by Race and Ethnicity; Minorities' Diminished Returns in the National Health Interview Survey (NHIS). *J Med Res Innov*, *3*(2). https://doi.org/10.32892/jmri.179

Assari, S., & Burgard, S. (2015). Black-White differences in the effect of baseline depressive symptoms on deaths due to renal diseases: 25 year follow up of a nationally representative community sample. *J Renal Inj Prev*, *4*(4), 127-134.

Assari, S., & Caldwell, C. H. (2019a). Family Income at Birth and Risk of Attention Deficit Hyperactivity Disorder at Age 15: Racial Differences. *Children (Basel)*, *6*(1). https://doi.org/10.3390/children6010010

Assari, S., & Caldwell, C. H. (2019b). Parental Educational Attainment Differentially Boosts School Performance of American Adolescents: Minorities' Diminished Returns. *J Family Reprod Health*, *13*(1), 7-13. https://doi.org/10.18502/jfrh.v13i1.1607

Assari, S., & Hani, N. (2018). Household Income and Children's Unmet Dental Care Need; Blacks' Diminished Return. *Dentistry journal*, *6*(2), 17. https://doi.org/10.3390/dj6020017

Assari, S., & Lankarani, M. (2018). Educational Attainment Promotes Fruit and Vegetable Intake for Whites but Not Blacks. *J*, *1*(1), 5. https://doi.org/10.3390/j1010005

Assari, S., & Lankarani, M. M. (2016a). Depressive Symptoms Are Associated with More Hopelessness among White than Black Older Adults. *Front Public Health*, *4*, 82. https://doi.org/10.3389/fpubh.2016.00082

Assari, S., & Lankarani, M. M. (2016b). Stressful Life Events and Risk of Depression 25 Years Later: Race and Gender Differences. *Front Public Health*, *4*, 49. https://doi.org/10.3389/fpubh.2016.00049

Assari, S., & Mistry, R. (2018). Educational Attainment and Smoking Status in a National Sample of American Adults; Evidence for the Blacks' Diminished Return. *Int J Environ Res Public Health*, *15*(4). https://doi.org/10.3390/ijerph15040763

Assari, S., & Moghani Lankarani, M. (2018a). Poverty Status and Childhood Asthma in White and Black Families: National Survey of Children's Health. *Healthcare (Basel)*, *6*(2). https://doi.org/10.3390/healthcare6020062

Assari, S., & Moghani Lankarani, M. (2018b). Workplace Racial Composition Explains High Perceived Discrimination of High Socioeconomic Status African American Men. *Brain Sci*, *8*(8). https://doi.org/10.3390/brainsci8080139

Assari, S., Boyce, S., Bazargan, M., & Caldwell, C. H. (2020). Mathematical Performance of American Youth: Diminished Returns of Educational Attainment of Asian-American Parents. *Education Sciences*, *10*(2), 32. https://doi.org/10.3390/educsci10020032

Assari, S., Boyce, S., Bazargan, M., Caldwell, C. H., & Zimmerman, M. A. (2020). Place-Based Diminished Returns of Parental Educational Attainment on School Performance of Non-Hispanic White Youth. *Frontiers in Education*, *5*(30). https://doi.org/10.3389/feduc.2020.00030

Assari, S., Boyce, S., Bazargan, M., Mincy, R., & Caldwell, C. H. (2019). Unequal Protective Effects of Parental Educational Attainment on the Body Mass Index of Black and White Youth. *International Journal of Environmental Research and Public Health*, *16*(19), 3641. https://doi.org/10.3390/ijerph16193641

Assari, S., Boyce, S., Caldwell, C. H., & Bazargan, M. (2020). Minorities' Diminished Returns of Parental Educational Attainment on Adolescents' Social, Emotional, and Behavioral Problems. *Children*, *7*(5), 49. https://doi.org/10.3390/children7050049

Assari, S., Boyce, S., Caldwell, C. H., & Bazargan, M. (2020). Parental Educational Attainment and Black-White Adolescents' Achievement Gap: Blacks' Diminished Returns. *Open J Soc Sci*, *8*(3), 282-297. https://doi.org/10.4236/jss.2020.83026

Assari, S., Caldwell, C. H., & Bazargan, M. (2019). Association Between Parental Educational Attainment and Youth Outcomes and Role of Race/Ethnicity. *JAMA Netw Open*, *2*(11), e1916018. https://doi.org/10.1001/jamanetworkopen.2019.16018

Assari, S., Caldwell, C. H., & Mincy, R. (2018a). Family Socioeconomic Status at Birth and Youth Impulsivity at Age 15; Blacks' Diminished Return. *Children (Basel)*, *5*(5). https://doi.org/10.3390/children5050058

Assari, S., Caldwell, C. H., & Mincy, R. B. (2018b). Maternal Educational Attainment at Birth Promotes Future Self-Rated Health of White but Not Black Youth: A 15-Year Cohort of a National Sample. *J Clin Med*, *7*(5). https://doi.org/10.3390/jcm7050093

Assari, S., Caldwell, C. H., & Zimmerman, M. A. (2018). Family Structure and Subsequent Anxiety Symptoms; Minorities' Diminished Return. *Brain Sci*, *8*(6). https://doi.org/10.3390/brainsci8060097

Assari, S., Farokhnia, M., & Mistry, R. (2019). Education Attainment and Alcohol Binge Drinking: Diminished Returns of Hispanics in Los Angeles. *Behav Sci (Basel)*, *9*(1). https://doi.org/10.3390/bs9010009

Assari, S., Lankarani, M. M., & Lankarani, R. M. (2013). Ethnicity Modifies the Additive Effects of Anxiety and Drug Use Disorders on Suicidal Ideation among Black Adults in the United States. *Int J Prev Med*, *4*(11), 1251-1257. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/24404358

Assari, S., Lapeyrouse, L. M., & Neighbors, H. W. (2018). Income and Self-Rated Mental Health: Diminished Returns for High Income Black Americans. *Behav Sci (Basel)*, *8*(5). https://doi.org/10.3390/bs8050050

Assari, S., Moazen-Zadeh, E., Caldwell, C. H., & Zimmerman, M. A. (2017). Racial Discrimination during Adolescence Predicts Mental Health Deterioration in Adulthood: Gender Differences among Blacks. *Front Public Health*, *5*, 104. https://doi.org/10.3389/fpubh.2017.00104

Assari, S., Moazen-Zadeh, E., Lankarani, M. M., & Micol-Foster, V. (2016). Race, Depressive Symptoms, and All-Cause Mortality in the United States. *Front Public Health*, *4*, 40. https://doi.org/10.3389/fpubh.2016.00040

Assari, S., Moghani Lankarani, M., Caldwell, C. H., & Zimmerman, M. A. (2016). Fear of Neighborhood Violence During Adolescence Predicts Development of Obesity a Decade Later: Gender Differences Among African Americans. *Arch Trauma Res*, *5*(2), e31475. https://doi.org/10.5812/atr.31475

Assari, S., Preiser, B., & Kelly, M. (2018). Education and Income Predict Future Emotional Well-Being of Whites but Not Blacks: A Ten-Year Cohort. *Brain Sci*, *8*(7). https://doi.org/10.3390/brainsci8070122

Assari, S., Schatten, H. T., Arias, S. A., Miller, I. W., Camargo, C. A., & Boudreaux, E. D. (2019). Higher Educational Attainment is Associated with Lower Risk of a Future Suicide Attempt Among Non-Hispanic Whites but not Non-Hispanic Blacks. *J Racial Ethn Health Disparities*. https://doi.org/10.1007/s40615-019-00601-z

Assari, S., Smith, J. R., Caldwell, C. H., & Zimmerman, M. A. (2015). Gender Differences in Longitudinal Links between Neighborhood Fear, Parental Support, and Depression among African American Emerging Adults. *Societies*, *5*(1), 151-170. https://doi.org/10.3390/soc5010151

Assari, S., Thomas, A., Caldwell, C. H., & Mincy, R. B. (2018). Blacks' Diminished Health Return of Family Structure and Socioeconomic Status; 15 Years of Follow-up of a National Urban Sample of Youth. *J Urban Health*, *95*(1), 21-35. https://doi.org/10.1007/s11524-017-0217-3

Bailey, Z. D., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *Lancet*, *389*(10077), 1453-1463. https://doi.org/10.1016/S0140-6736(17)30569-X

Berlin, L. J., Ispa, J. M., Fine, M. A., Malone, P. S., Brooks-Gunn, J., Brady-Smith, C., ... Bai, Y. (2009). Correlates and consequences of spanking and verbal punishment for low-income White, African American, and Mexican American toddlers. *Child development*, *80*(5), 1403-1420. https://doi.org/10.1111/j.1467-8624.2009.01341.x

Blumenshine, P., Egerter, S., Barclay, C. J., Cubbin, C., & Braveman, P. A. (2010). Socioeconomic disparities in adverse birth outcomes: a systematic review. *Am J Prev Med*, *39*(3), 263-272. https://doi.org/10.1016/j.amepre.2010.05.012

Boyce, S., Bazargan, M., Caldwell, C. H., Zimmerman, M. A., & Assari, S. (2020). Parental Educational Attainment and Social Environment of Urban Public Schools in the U.S.: Blacks' Diminished Returns. *Children*, *7*(5), 44. https://doi.org/10.3390/children7050044

Brown, A. S., Holden, G. W., & Ashraf, R. (2018). Spank, slap, or hit? How labels alter perceptions of child discipline. *Psychology of violence*, *8*(1), 1. https://doi.org/10.1037/vio0000080

Buemi, S. J. (2009). *How race-gender status affects the relationship between spanking and depressive symptoms among children and adolescents*. Kent State University.

Butler, A. M., & Rodgers, C. R. R. (2019). Developing a Policy Brief on Child Mental Health Disparities to Promote Strategies for Advancing Equity among Racial/Ethnic Minority Youth. *Ethn Dis*, *29*(Suppl 2), 421-426. https://doi.org/10.18865/ed.29.S2.421

Campbell, E. E., Gilliland, J., Dworatzek, P. D. N., De Vrijer, B., Penava, D., & Seabrook, J. A. (2018). Socioeconomic Status and Adverse Birth Outcomes: A Population-Based Canadian Sample. *J Biosoc Sci*, *50*(1), 102-113. https://doi.org/10.1017/S0021932017000062

Chuang, Y.-C., Ennett, S. T., Bauman, K. E., & Foshee, V. A. (2005). Neighborhood influences on adolescent cigarette and alcohol use: Mediating effects through parent and peer behaviors. *Journal of Health and Social Behavior*, *46*(2), 187-204. https://doi.org/10.1177/002214650504600205

Coley, R. L., Kull, M. A., & Carrano, J. (2014). Parental endorsement of spanking and children's internalizing and externalizing problems in African American and Hispanic families. *Journal of family psychology*, *28*(1), 22. https://doi.org/10.1037/a0035272

Day, R. D., Peterson, G. W., & McCracken, C. (1998). Predicting spanking of younger and older children by mothers and fathers. *Journal of Marriage and the Family*, 79-94. https://doi.org/10.2307/353443

DeGarmo, D. S., Forgatch, M. S., Martinez, J., & Charles, R. (1999). Parenting of divorced mothers as a link between social status and boys' academic outcomes: Unpacking the effects of socioeconomic status. *Child development*, *70*(5), 1231-1245. https://doi.org/10.1111/1467-8624.00089

Dodge, K. A., McLoyd, V. C., & Lansford, J. E. (2005). *The Cultural Context of Physically Disciplining Children*.

Eamon, M. K. (2002). Poverty, parenting, peer, and neighborhood influences on young adolescent antisocial behavior. *Journal of Social Service Research*, *28*(1), 1-23. https://doi.org/10.1300/J079v28n01_01

Farmer, M. M., & Ferraro, K. F. (2005). Are racial disparities in health conditional on socioeconomic status? *Soc Sci Med*, *60*(1), 191-204. https://doi.org/10.1016/j.socscimed.2004.04.026

Fuller-Rowell, T. E., Curtis, D. S., Doan, S. N., & Coe, C. L. (2015). Racial disparities in the health benefits of educational attainment: A study of inflammatory trajectories among African American and white adults. *Psychosom Med*, *77*(1), 33-40. https://doi.org/10.1097/PSY.0000000000000128

Gee, G. C., & Ford, C. L. (2011). STRUCTURAL RACISM AND HEALTH INEQUITIES: Old Issues, New Directions. *Du Bois Rev*, *8*(1), 115-132. https://doi.org/10.1017/S1742058X11000130

Gershoff, E. T., & Grogan-Kaylor, A. (2016). Spanking and child outcomes: Old controversies and new meta-analyses. *Journal of family psychology*, *30*(4), 453. https://doi.org/10.1037/fam0000191

Gershoff, E. T., Ansari, A., Purtell, K. M., & Sexton, H. R. (2016). Changes in parents' spanking and reading as mechanisms for Head Start impacts on children. *Journal of family psychology*, *30*(4), 480. https://doi.org/10.1037/fam0000172

Gershoff, E. T., Lansford, J. E., Sexton, H. R., Davis-Kean, P., & Sameroff, A. J. (2012). Longitudinal links between spanking and children's externalizing behaviors in a national sample of White, Black, Hispanic, and Asian American families. *Child development*, *83*(3), 838-843. https://doi.org/10.1111/j.1467-8624.2011.01732.x

Giles-Sims, J., Straus, M. A., & Sugarman, D. B. (1995). Child, maternal, and family characteristics associated with spanking. *Family Relations*, 170-176. https://doi.org/10.2307/584804

Grogan-Kaylor, A. (2004). The effect of corporal punishment on antisocial behavior in children. *Social work research*, *28*(3), 153-162. https://doi.org/10.1093/swr/28.3.153

Gromoske, A. N., & Maguire-Jack, K. (2012). Transactional and cascading relations between early spanking and children's social-emotional development. *Journal of Marriage and Family*, *74*(5), 1054-1068. https://doi.org/10.1111/j.1741-3737.2012.01013.x

Hamilton, D., & Darity Jr, W. (2009). Race, Wealth, and Intergenerational Poverty: There will never be a post-racial America if the wealth gap persists. *The American Prospect*, *20*(7), A10-A12.

Heffer, R. W., & Kelley, M. L. (1987). Mothers' acceptance of behavioral interventions for children: The influence of parent race and income. *Behavior Therapy*, *18*(2), 153-163. https://doi.org/10.1016/S0005-7894(87)80039-4

Honig, A. S., & Chung, M. (1989). Child-rearing practices of urban poor mothers of infants and three-year-olds in five cultures. *Early child development and care*, *50*(1), 75-97. https://doi.org/10.1080/0300443890500107

Hudson, D. L., Bullard, K. M., Neighbors, H. W., Geronimus, A. T., Yang, J., & Jackson, J. S. (2012). Are benefits conferred with greater socioeconomic position undermined by racial discrimination among African American men? *J Mens Health*, *9*(2), 127-136. https://doi.org/10.1016/j.jomh.2012.03.006

Hudson, D. L., Neighbors, H. W., Geronimus, A. T., & Jackson, J. S. (2012). The relationship between socioeconomic position and depression among a US nationally representative sample of African Americans. *Soc Psychiatry Psychiatr Epidemiol*, *47*(3), 373-381. https://doi.org/10.1007/s00127-011-0348-x

Hudson, D. L., Neighbors, H. W., Geronimus, A. T., & Jackson, J. S. (2016). Racial Discrimination, John Henryism, and Depression Among African Americans. *J Black Psychol*, *42*(3), 221-243. https://doi.org/10.1177/0095798414567757

Kothari, C. L., Paul, R., Dormitorio, B., Ospina, F., James, A., Lenz, D., ... Wiley, J. (2016). The interplay of race, socioeconomic status and neighborhood residence upon birth outcomes in a high black infant mortality community. *SSM-population health*, *2*, 859-867. https://doi.org/10.1016/j.ssmph.2016.09.011

Lansford, J. E., Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *J Child Psychol Psychiatry*, *45*(4), 801-812. https://doi.org/10.1111/j.1469-7610.2004.00273.x

Lee, S. J., Altschul, I., & Gershoff, E. T. (2015). Wait until your father gets home? Mother's and fathers' spanking and development of child aggression. *Children and youth services review*, *52*, 158-166. https://doi.org/10.1016/j.childyouth.2014.11.006

Lee, S. J., Grogan-Kaylor, A., & Berger, L. M. (2014). Parental spanking of 1-year-old children and subsequent child protective services involvement. *Child Abuse Negl*, *38*(5), 875-883. https://doi.org/10.1016/j.chiabu.2014.01.018

Louis, J. M., Menard, M. K., & Gee, R. E. (2015). Racial and ethnic disparities in maternal morbidity and mortality. *Obstet Gynecol*, *125*(3), 690-694. https://doi.org/10.1097/AOG.0000000000000704

Ma, J. (2016). Neighborhood and parenting both matter: The role of neighborhood collective efficacy and maternal spanking in early behavior problems. *Children and youth services review*, *70*, 250-260. https://doi.org/10.1016/j.childyouth.2016.09.028

Ma, J., Grogan-Kaylor, A., & Klein, S. (2018). Neighborhood collective efficacy, parental spanking, and subsequent risk of household child protective services involvement. *Child abuse & neglect*, *80*, 90-98. https://doi.org/10.1016/j.chiabu.2018.03.019

Ma, J., Grogan-Kaylor, A., & Lee, S. J. (2018). Associations of neighborhood disorganization and maternal spanking with children's aggression: A fixed-effects regression analysis. *Child Abuse Negl*, *76*, 106-116. https://doi.org/10.1016/j.chiabu.2017.10.013

Ma, J., Grogan-Kaylor, A., & Lee, S. J. (2018). Associations of neighborhood disorganization and maternal spanking with children's aggression: A fixed-effects regression analysis. *Child abuse & neglect*, *76*, 106-116. https://doi.org/10.1016/j.chiabu.2017.10.013

Mackenzie, M. J., Nicklas, E., Brooks-Gunn, J., & Waldfogel, J. (2011). Who Spanks Infants and Toddlers? Evidence from the Fragile Families and Child Well-Being Study. *Child Youth Serv Rev*, *33*(8), 1364-1373. https://doi.org/10.1016/j.childyouth.2011.04.007

MacKenzie, M. J., Nicklas, E., Brooks-Gunn, J., & Waldfogel, J. (2014). Repeated exposure to high-frequency spanking and child externalizing behavior across the first decade: A moderating role for cumulative risk. *Child Abuse Negl*, *38*(12), 1895-1901. https://doi.org/10.1016/j.chiabu.2014.11.004

MacKenzie, M. J., Nicklas, E., Waldfogel, J., & Brooks-Gunn, J. (2013). Spanking and child development across the first decade of life. *Pediatrics*, *132*(5), e1118-1125. https://doi.org/10.1542/peds.2013-1227

MacMillan, H. L., Boyle, M. H., Wong, M. Y.-Y., Duku, E. K., Fleming, J. E., & Walsh, C. A. (1999). Slapping and spanking in childhood and its association with lifetime prevalence of psychiatric disorders in a general population sample. *CMAJ*, *161*(7), 805-809.

McLeod, J. D., Kruttschnitt, C., & Dornfeld, M. (1994). Does parenting explain the effects of structural conditions on children's antisocial behavior? A comparison of Blacks and Whites. *Social Forces*, *73*(2), 575-604. https://doi.org/10.2307/2579822

Mistry, R. S., Biesanz, J. C., Chien, N., Howes, C., & Benner, A. D. (2008). Socioeconomic status, parental investments, and the cognitive and behavioral outcomes of low-income children from immigrant and native households. *Early Childhood Research Quarterly*, *23*(2), 193-212. https://doi.org/10.1016/j.ecresq.2008.01.002

Mothers' Acceptance of Child Management Methods. *Behavior Therapy*, *49*(5), 668-680.

Navarro, V. (1989). Race or class, or race and class. *Int J Health Serv*, *19*(2), 311-314. https://doi.org/10.2190/CNUH-67T0-RLBT-FMCA

Navarro, V. (1990). Race or class versus race and class: Mortality differentials in the United States. *Lancet*, *336*(8725), 1238-1240. https://doi.org/10.1016/0140-6736(90)92846-A

Navarro, V. (1991). Race or class or race and class: Growing mortality differentials in the United States. *Int J Health Serv*, *21*(2), 229-235. https://doi.org/10.2190/5WXM-QK9K-PTMQ-T1FG

Odgers, C. L., Caspi, A., Russell, M. A., Sampson, R. J., Arseneault, L., & Moffitt, T. E. (2012). Supportive parenting mediates neighborhood socioeconomic disparities in children's antisocial behavior from ages 5 to 12. *Development and psychopathology*, *24*(3), 705-721. https://doi.org/10.1017/S0954579412000326

Okuzono, S., Fujiwara, T., Kato, T., & Kawachi, I. (2017). Spanking and subsequent behavioral problems in toddlers: A propensity score-matched, prospective study in Japan. *Child abuse & neglect*, *69*, 62-71. https://doi.org/10.1016/j.chiabu.2017.04.002

Oliver, M. L., & Shapiro, T. M. (1999). *Black wealth/white wealth*. New York: Routledge.

Oliver, M., & Shapiro, T. (2013). *Black wealth/white wealth: A new perspective on racial inequality*. Routledge. https://doi.org/10.4324/9780203707425

Oscea Hawkins, A., Kmett Danielson, C., de Arellano, M. A., Hanson, R. F., Ruggiero, K. J., Smith, D. W., ... Kilpatrick, D. G. (2010). Ethnic/racial differences in the prevalence of injurious spanking and other child physical abuse in a national survey of adolescents. *Child Maltreatment*, *15*(3), 242-249. https://doi.org/10.1177/1077559510367938

Paschall, M. J., Ringwalt, C. L., & Flewelling, R. L. (2003). Effects of parenting, father absence, and affiliation with delinquent peers on delinquent behavior among African-American male adolescents. *Adolescence*, *38*(149), 15.

Perneger, T. V., Whelton, P. K., & Klag, M. J. (1995). Race and end-stage renal disease: socioeconomic status and access to health care as mediating factors. *Archives of internal medicine*, *155*(11), 1201-1208.

Plessy, K. S., Long, A. C., & Kelley, M. L. (2018). *The Influence of Race and Income on Community*. https://doi.org/10.1016/j.beth.2017.12.011

Poverty, low birthweight and brain size. (2017). *Arch Dis Child*, *102*(2), 156. https://doi.org/10.1136/archdischild-2016-312528

Ragavan, M. I., Griffith, K., Bair-Merritt, M., Cabral, H. J., & Kistin, C. J. (2019). First-Generation Immigrant Mothers Report Less Spanking of 1-Year-Old Children Compared with Mothers of Other Immigrant Generations. *Matern Child Health J*, *23*(4), 496-503. https://doi.org/10.1007/s10995-018-2660-5

Rodriguez, J. M., Bound, J., & Geronimus, A. T. (2014). US infant mortality and the President's party. *Int J Epidemiol*, *43*(3), 818-826. https://doi.org/10.1093/ije/dyt252

Shanika Boyce, M. B., Cleopatra, C., Marc, Z., & Shervin, A. (2020). Protective Effects of Parental Educational Attainment on School Social Environmental Risk: Blacks' Diminished Returns in Urban Public Schools. *Children*. https://doi.org/10.3390/children7050044

Shervin, A., & Ritesh, M. (2019). Diminished Return of Employment on Ever Smoking Among Hispanic Whites in Los Angeles. *Health Equity*, *3*(1), 138-144. https://doi.org/10.1089/heq.2018.0070

Silvestrin, S., Silva, C. H., Hirakata, V. N., Goldani, A. A., Silveira, P. P., & Goldani, M. Z. (2013). Maternal education level and low birth weight: a meta-analysis. *J Pediatr (Rio J)*, *89*(4), 339-345. https://doi.org/10.1016/j.jped.2013.01.003

Straus, M. A., & Mouradian, V. E. (1998). Impulsive corporal punishment by mothers and antisocial behavior and impulsiveness of children. *Behavioral sciences & the law*, *16*(3), 353-374. https://doi.org/10.1002/(SICI)1099-0798(199822)16:3<353::AID-BSL313>3.0.CO;2-O

Straus, M. A., Sugarman, D. B., & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of Pediatrics & Adolescent Medicine*, *151*(8), 761-767. https://doi.org/10.1001/archpedi.1997.02170450011002

Taylor, C. A., Lee, S. J., Guterman, N. B., & Rice, J. C. (2010). Use of spanking for 3-year-old children and associated intimate partner aggression or violence. *Pediatrics*, *126*(3), 415-424. https://doi.org/10.1542/peds.2010-0314

Taylor, C. A., Manganello, J. A., Lee, S. J., & Rice, J. C. (2010). Mothers' spanking of 3-year-old children and subsequent risk of children's aggressive behavior. *Pediatrics*, *125*(5), e1057-1065. https://doi.org/10.1542/peds.2009-2678

Vittrup, B., & Holden, G. W. (2010). Children's assessments of corporal punishment and other disciplinary practices: The role of age, race, SES, and exposure to spanking. *Journal of applied developmental psychology*, *31*(3), 211-220. https://doi.org/10.1016/j.appdev.2009.11.003

Waldfogel, J., Craigie, T. A., & Brooks-Gunn, J. (2010). Fragile families and child wellbeing. *Future Child*, *20*(2), 87-112. https://doi.org/10.1353/foc.2010.0002

Ward, K. P., Lee, S. J., Limb, G. E., & Grogan-Kaylor, A. C. (2019). Physical Punishment and Child Externalizing Behavior: Comparing American Indian, White, and African American Children. *J Interpers Violence*. https://doi.org/10.1177/0886260519861678

Wilson, K. B., Thorpe, R. J., Jr., & LaVeist, T. A. (2017). Dollar for Dollar: Racial and ethnic inequalities in health and health-related outcomes among persons with very high income. *Prev Med*, *96*, 149-153. https://doi.org/10.1016/j.ypmed.2016.08.038

Zegiob, L. E., & Forehand, R. (1975). Maternal interactive behavior as a function of race, socioeconomic status, and sex of the child. *Child development*, 564-568. https://doi.org/10.2307/1128160