

**POSITIVE PARENTING AND ADOLESCENT ADJUSTMENT IN BLACK,
HISPANIC, AND WHITE FAMILIES FACING SOCIOECONOMIC
ADVERSITY: A RESILIENCE-BASED, TWO-GENERATION APPROACH**

by

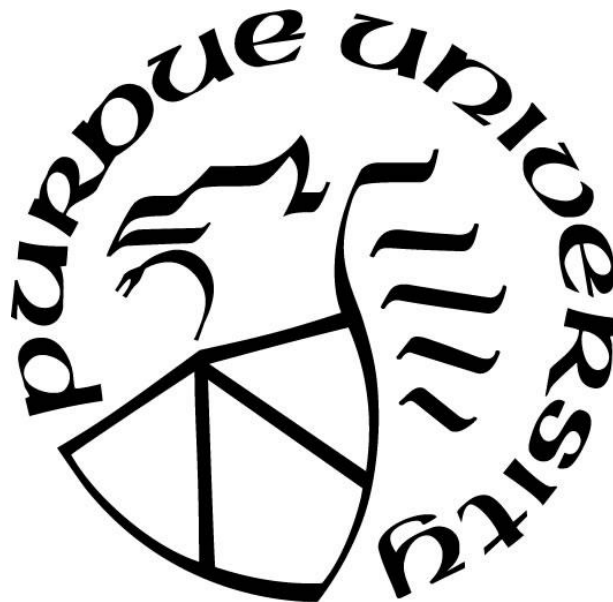
Nayantara Nair

A Dissertation

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Doctor of Philosophy



Department of Human Development and Family Studies

West Lafayette, Indiana

December 2021

THE PURDUE UNIVERSITY GRADUATE SCHOOL
STATEMENT OF COMMITTEE APPROVAL

Dr. Zoe Taylor, Co-Chair

Department of Human Development & Family Studies

Dr. Kristine Marceau, Co-Chair

Department of Human Development & Family Studies

Dr. Shelley MacDermid Wadsworth

Department of Human Development & Family Studies

Dr. Yumary Ruiz

Department of Public Health

Approved by:

Dr. David Purpura

This work is dedicated to everyone who has kept us going during the Covid-19 pandemic: to healthcare workers, mental health professionals, and all essential service employees, thank you.

I also dedicate this to my grandfather, Captain C. P. Cherian, who waited patiently for 22 years for me to finish studying and just missed seeing me graduate. I'm done (for now), Appacha!

ACKNOWLEDGMENTS

It has taken an extraordinary amount of support, both professional and personal, for me to be able to complete this work. I would first like to thank my advisor, Dr. Zoe Taylor, for her continued mentorship, support, and encouragement over the past five and a half years. Thank you especially for being a present and hands-on mentor, for detailed feedback on countless drafts of this and other documents, and for understanding and providing the kind of support I needed as international graduate student. To my dissertation co-chair, Dr. Kristine Marceau, thank you for adopting me into your lab and mentoring me like you would one of your own advisees. I am grateful for the many research opportunities you provided me with, the statistics and methods training I received under your guidance, and for how intentionally you model the importance of ethical research. To Dr. Shelley MacDermid Wadsworth who has also been instrumental in my graduate training, thank you for always pushing me to think about the broader implications of my work, for making the time to give me professional development guidance whenever I needed it, and for introducing me to the world of family policy. Finally, thank you to Dr. Yumary Ruiz, for your public health expertise and valuable feedback that has made this dissertation stronger.

To my Purdue/HDFS friends who never fail to show up for me: thank you so much for the hours of laughter and emotional support that have been my fuel since 2016. I can't imagine getting to this point without all of you. And to my friends from home, I am so thankful that you continued to love and support me when I was a distracted friend. I also owe a huge thank you to my extended family, particularly my two aunts in the U.S., for keeping me sane this past year. To my Chicago family, thank you especially for holding me together every time I ran to you for comfort.

Above all else, to my parents: for your unwavering belief in me, for putting up with my grouchiness with never-ending patience and humor, and for the love and understanding with which you guided me through the stress of dissertating during a pandemic—thank you isn't big enough. This degree unquestionably belongs to both of you, too.

This dissertation relies on data from the Fragile Families and Child Wellbeing Study and was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development under award numbers R25HD074544 and R01HD036916. The content of this work is solely the responsibility of the author and does not necessarily represent the official views of the National Institutes of Health.

TABLE OF CONTENTS

LIST OF TABLES	9
LIST OF FIGURES	10
ABSTRACT	11
CHAPTER 1. INTRODUCTION, BACKGROUND, AND OVERVIEW	12
Definition of the Problem	12
Theoretical Perspectives	13
Family Stress Model (FSM)	13
Developmental Systems Perspective	15
Developmental Resilience Theory	16
Brief Dissertation Overview	17
Socioeconomic Adversity	18
Conceptualization and Measurement	18
Race-Ethnic Differences in Experiences of Socioeconomic Adversity	21
Impact on Youth Development	22
The FFCWS Sample: Families at Risk of Experiencing Socioeconomic Adversity	24
Parenting in the Context of Socioeconomic Adversity	26
Race-Ethnic Differences in Family Stress Processes	27
The Buffering Effects of Social Capital	28
Positive Parenting and Youth Adjustment	31
Adolescent Adjustment in the Context of Socioeconomic Adversity	33
Adolescent Maladjustment: Substance Use	34
Adolescent Thriving: Wellbeing	36
Self-Regulation as a Key Mechanism	37
Developmental Timing of Self-Regulation	38
Self-Regulation in the Context of Socioeconomic Adversity	39
Self-Regulation and Later Adjustment	39
Gaps in the Literature	41
Current Dissertation	42
Paper Aims and Hypotheses	43

Orientation to the Fragile Families and Child Wellbeing Dataset	44
CHAPTER 2. PARENTAL RESILIENCE IN THE CONTEXT OF SOCIOECONOMIC	
ADVERSITY: THE PROTECTIVE ROLE OF SOCIAL CAPITAL (PAPER 1).....	46
Socioeconomic Adversity in Single- and Cohabiting-Mother Families	46
Differences in Experiences of Socioeconomic Adversity by Race-Ethnicity	47
Measuring Socioeconomic Adversity.....	48
Parenting in the Context of Socioeconomic Adversity.....	49
Social Capital as a Protective Factor	51
The Present Study	52
Method	54
Participants and Procedures	54
Measures	56
Socioeconomic Adversity.....	56
Positive Parenting	57
Social Capital.....	58
Covariates	59
Analytic Strategy	59
Constructing the Socioeconomic Adversity Measure.....	59
Constructing the Baseline Model	60
Constructing the Final Socioeconomic Adversity Variables	61
Hypothesis Testing	62
Data Preparation.....	62
Hypothesis Testing Regression Equations	63
Power Analysis.....	64
Results.....	64
Socioeconomic Adversity Measure Construction.....	64
Baseline Model Results	64
Describing the Final Socioeconomic Adversity Variables	65
Non-Hispanic White Families	65
Non-Hispanic Black Families	66
Hispanic Families	67

Hypothesis Test Results	68
Non-Hispanic Black Families	68
Hispanic Families	68
Non-Hispanic White Families	69
Discussion	69
Measuring Socioeconomic Adversity	70
Effects on Parenting and the Protective Role of Social Capital	73
Conclusions	75
Limitations and Future Directions	75
Strengths and Implications	77
CHAPTER 3. ADOLESCENT ADJUSTMENT IN THE CONTEXT OF SOCIOECONOMIC ADVERSITY: THE PROTECTIVE ROLE OF POSITIVE PARENTING (PAPER 2)	87
Socioeconomic Adversity and Adolescent Adjustment	87
Indicator of Maladjustment: Adolescent Substance Use	88
Race-Ethnic Differences in Adolescent Substance Use	90
Indicator of Thriving: Adolescent Wellbeing	90
Race-Ethnic Differences in Adolescent Wellbeing	92
The Mediating Role of Self-Regulation	92
Socioeconomic Adversity and Self-Regulation	92
Self-Regulation and Later Adjustment	93
Positive Parenting: A Crucial Protective Influence	94
The Present Study	96
Method	98
Participants and Procedures	98
Measures	99
Socioeconomic Adversity	99
Positive Parenting	101
Child Self-Regulation	101
Adolescent Substance Use	101
Adolescent Wellbeing	102
Covariates	103

Analytic Strategy	104
Data Preparation	104
Hypothesis Testing	104
Power Analysis	106
Results.....	106
Non-Hispanic Black Families	107
Indirect Effects.....	107
Moderating Effects of Positive Parenting.....	108
Hispanic Families.....	109
Indirect Effects.....	109
Moderating Effects of Positive Parenting.....	109
Non-Hispanic White Families.....	109
Indirect Effects.....	109
Moderating Effects of Positive Parenting.....	110
Discussion	110
Socioeconomic Adversity, Self-Regulation, and Youth Adjustment	111
Non-Hispanic Black Youth	111
Hispanic Youth	112
Non-Hispanic White Youth	113
Protective Effects of Positive Parenting	115
Conclusions.....	117
Limitations and Future Directions	117
Strengths and Implications	118
CHAPTER 4. SUMMARY AND CONCLUSIONS	130
Summary of Key Findings	130
Conclusions.....	132
APPENDIX A: PAPER 1 SUPPLEMENTAL TABLES & FIGURES	134
APPENDIX B: PAPER 2 SUPPLEMENTAL TABLES & FIGURES.....	145
REFERENCES	153

LIST OF TABLES

Table 1. Descriptive Data of Socioeconomic Adversity Factor Scores and Indicator Variables by Quintile for Each Race-Ethnicity.....	79
Table 2. Descriptive Data of Final Socioeconomic Adversity Variables	80
Table 3. Descriptive Data of Key Study Variables in Paper 1.....	81
Table 4. Paper 1 Hypothesis Test Regression Results: Non-Hispanic Black Families	82
Table 5. Paper 1 Hypothesis Test Regression Results: Hispanic Families.....	83
Table 6. Paper 1 Hypothesis Test Regression Results: Non-Hispanic White Families.....	84
Table 7. Descriptive Data of Key Study Variables in Paper 2.....	120
Table 8. Frequencies of Adolescent Substance Use Uptake Scores by Race-Ethnicity	121
Table 9. Paper 2 Standardized Direct Effects: non-Hispanic Black Youth	122
Table 10. Paper 2 Standardized Direct Effects: Hispanic Youth.....	123
Table 11. Paper 2 Standardized Direct Effects: non-Hispanic White Youth.....	124
Table 12. Paper 2 Standardized Indirect Effects Across all Race-Ethnic Samples	125

LIST OF FIGURES

Figure 1. Overall Conceptual Model for Both Proposed Papers	44
Figure 2. Socioeconomic Adversity Measurement Construction: CFA Results for (a) non-Hispanic Black Families, (b) Hispanic Families, (c) non-Hispanic White Families	85
Figure 3. Paper 2 Conceptual Model	126
Figure 4. Paper 2 Model Results: Non-Hispanic Black Families	127
Figure 5. Paper 2 Model Results: Hispanic Families.....	128
Figure 6. Paper 2 Model Results: non-Hispanic White Families.....	129

ABSTRACT

Adversity stemming from socioeconomic risks poses a considerable threat to the wellbeing of parents and youth. Research has shown that children's exposure to *cumulative* (consisting of multiple co-occurring risks), *chronic* (experienced across more than one timepoint), and *early* (experienced during the birth-to-three-year period) socioeconomic adversity is particularly detrimental to their development. The first aim of this dissertation was therefore to create a measure of socioeconomic adversity that incorporates multiple risk indicators, and that could be used to tap into both the chronicity and timing of exposure. Using this measure, the problem that this dissertation aimed to address is the conflicting evidence that effective parenting is crucial in facilitating positive outcomes in at-risk youth, but that parenting itself is severely compromised in families experiencing socioeconomic adversity. Therefore, the overarching goal of this dissertation was to identify protective factors that can be leveraged to promote positive cascades for parents and youth in the context of socioeconomic adversity. Paper 1 analyzed whether social capital facilitates *parental resilience*, or the capacity of parents to deliver competent and high-quality parenting to children despite the presence of socioeconomic risks. Paper 2 assessed whether positive parenting in turn facilitates *adolescent resilience* and *wellbeing*, or the reduction of maladaptive outcomes and presence of flourishing outcomes despite their exposure to this adversity. Given differences in the experiences of socioeconomic adversity as well as its effects on parents and youth across race-ethnicities, a major goal of this work was to test dissertation aims separately within Black, Hispanic, and White families. Overall, Paper 1 findings suggest that social participation and perceived neighborhood control may attenuate the effects of socioeconomic adversity on positive parenting for Black and White mothers respectively. For Hispanic mothers, social cohesion was found to be a promotive factor for positive parenting in the context of socioeconomic adversity. Paper 2 results indicate that socioeconomic adversity is indirectly associated with higher levels of adolescent substance use in Black youth, and lower levels of adolescent wellbeing in White youth, through lowered self-regulation in middle childhood. However, higher levels of positive parenting in early and middle childhood seemed to weaken these negative effects within non-Hispanic families. These results reinforce the need to enhance social and neighborhood capital for parents facing socioeconomic adversity, in order to facilitate positive parenting behaviors that may in turn protect youth from its negative effects.

CHAPTER 1. INTRODUCTION, BACKGROUND, AND OVERVIEW

Definition of the Problem

Approximately 12 million children in the U.S. live in families with incomes below the federal poverty threshold; a number that is known to be an underestimation due to the limitations of such a poverty measure to adequately allow for families' needs (Koball, Moore, & Hernandez, 2020). Poverty continues to be a focal point of interest to social scientists, as socioeconomic status (SES)-related adversity poses a particularly complex set of risks within the context of child, youth, and family wellbeing. In addition to the considerable detrimental impacts caused by income poverty alone, exposure to poor economic conditions is also associated with multiple co-occurring ecological risks such as residential instability, poorer neighborhood quality, and maladaptive home environments (Evans & English, 2002); the cumulative effects of which are highly likely to threaten the successful functioning of parents and children (Evans et al., 2013; Trentacosta et al., 2008). Specifically, researchers have consistently found that families experiencing socioeconomic disadvantages exhibit persistent maladaptive outcomes across multiple generations, including heightened parental stress, increased harsh parenting practices, and ultimately, worse child and adolescent health and wellbeing (Choi et al., 2018; Conger et al., 1992, 1994; Jocoson & McLoyd, 2015; D. Lee & Jackson, 2017; Shelleby, 2018). Children exposed to high levels of adversity such as chronic poverty are at a higher risk of mental health concerns (Reiss, 2013), cumulative disease risk (Wickrama et al., 2017), poorer cognitive and socioemotional development (Evans et al., 2005; Felner et al., 1995; Gershoff et al., 2007), and lower educational attainment and earnings (Duncan et al., 2010; Eamon, 2001). Given the extensive harmful impact of growing up in poverty, identifying mechanisms that enable both parents and youth to function adaptively in the context of socioeconomic adversity remains a top public policy and health priority. Additionally, with much of the literature focusing on risk models of socioeconomic adversity exposure, there remains a need for more research that aims to understand resilience processes and positive adaptation in the context of poverty, especially in developmentally and ecologically appropriate ways.

Drawing on principles from the Family Stress Model (Conger et al., 2010), and broadly informed by developmental systems perspectives (Ford & Lerner, 1992) and the developmental resilience framework (Masten, 2015), the objectives of the two papers in this article-style

dissertation are to uncover resilience mechanisms that buffer parents and youth from the harmful impacts of socioeconomic adversity, and foster youth wellbeing (e.g., happiness, optimism) in this context. Specifically, this dissertation takes a two-generation approach (Chase-Lansdale & Brooks-Gunn, 2014) in aiming to uncover factors that foster positive parenting in the context of high risk, and subsequently assess positive parenting as a potential protective factor that facilitates adolescent adjustment (i.e., maintains self-regulation, and both mitigates negative outcomes as well as enhances positive outcomes) in youth exposed to high levels of socioeconomic risk.

Paper 1 (*Parental Resilience in the Context of Socioeconomic Adversity: The Protective Role of Social Capital*) examines whether mothers' social capital buffers mothers from the impacts of socioeconomic adversity by fostering positive parenting behaviors in this context. Paper 2 (*Adolescent Adjustment in the Context of Socioeconomic Adversity: The Protective Role of Positive Parenting*) explores a) the longitudinal impacts of socioeconomic adversity on adolescent adjustment (both maladjustment and flourishing outcomes) through the mediating role of self-regulation, and b) whether positive parenting buffers adolescents from the negative impacts of socioeconomic adversity. Together, these papers jointly contribute to the understanding of adaptive factors across multiple systems that disrupt family stress processes and have positive spillover effects that ultimately benefit youth outcomes in the context of socioeconomic adversity.

This document is organized as follows: the current chapter provides an overview of the overall dissertation conceptual model, an introduction to the key constructs of the dissertation, and a summary of the background literature. The next two chapters present Papers 1 and 2 in full, and finally Chapter 4 offers a summary of key findings and the broader implications of this work.

Theoretical Perspectives

Family Stress Model (FSM)

The most well-established theoretical perspective explaining the detrimental impact of socioeconomic adversity on parenting and child wellbeing is the Family Stress Model (FSM). This model posits that economic hardships lead to harsh parenting behaviors and ultimately, maladaptive youth outcomes, through the mediating pathways of parental distress and interparental conflict (Conger et al., 1994, 2010; Masarik & Conger, 2017). Substantial evidence supporting this model has documented that economic *hardships* characterized by low income or negative

financial events generate greater economic *pressures* represented by the daily strains and hassles resulting from the reduced ability to pay bills or meet basic needs (Landers-Potts et al., 2015; Newland et al., 2013). This in turn leads to parents' *psychological distress* and interparental relationship problems, which eventually leads to *disrupted parenting* as indicated by increased harshness, overcontrol, insensitivity, and inconsistency (Neppl et al., 2016; Newland et al., 2013). The family stress process as described by this model culminates in poorer child and adolescent outcomes. Numerous studies have provided support for the hypothesis that the disrupted parenting practices caused by economic hardship and pressure are linked to externalizing problems and conduct disorders in childhood and adolescence (Ponnet, 2014; Shaw & Shelleby, 2014; L. G. Simons et al., 2016), adolescent substance use (Hardaway & Cornelius, 2014), and internalizing concerns in childhood and adolescence (Landers-Potts et al., 2015; X. Zhang, 2014). Researchers have found support for FSM processes in families of different race-ethnicities and cultures (Emmen et al., 2013; Hou et al., 2016; Iruka et al., 2012; Krishnakumar et al., 2014; L. G. Simons et al., 2016; White et al., 2015), as well as in single-mother families (Taylor et al., 2010), validating its applicability across varying family contexts and structures. Given the substantial evidence documenting the paths outlined in the FSM, it is important for researchers to focus their efforts on identifying factors that can disrupt the stress processes in families facing economic hardship.

Converse to maladaptive pathways highlighted above, there is also evidence in the FSM literature indicating that positive parenting practices are linked to child wellbeing, even in the context of socioeconomic adversity. That is, parenting characterized by warm and supportive behaviors have been found to be associated with increases in self-regulation, prosocial behavior, and optimism, as well as decreases in internalizing symptoms, delinquency, and risky health behaviors in the context of economic adversity (Jeon & Neppl, 2016; Kwon & Wickrama, 2014; T. K. Lee et al., 2013; Neppl et al., 2015). Additionally, research assessing protective factors in the context of family stress processes have found that parental social support is associated with less parenting stress, adaptive parenting practices, and positive child outcomes (McConnell et al., 2011; Taylor & Conger, 2017), and that neighborhood support attenuates the association between harsh parenting and children's behavioral concerns (Krishnakumar et al., 2014). Taken together, these findings suggest that despite strong evidence supporting the family stress processes triggered by economic hardships, protective factors such as social and neighborhood support and positive parenting can weaken these processes and ultimately buffer parents and youth from the impacts of

socioeconomic adversity. Thus, the FSM informs this dissertation in two key ways: 1) by lending theoretical credence to the problem that the proposed research addresses, and 2) providing support for the hypothesized protective effects of social and neighborhood support (hereafter referred to as social capital) and positive parenting on youth outcomes in the context of socioeconomic adversity.

Developmental Systems Perspective

This dissertation is also broadly grounded in the developmental systems perspective, and relatedly, the developmental resilience framework. Traditionally, theoretical models have implicated variables at a single level of organization within the ecology of human development (e.g., society, physiology, etc.) to be the primary influence in the links between SES, parents/parenting, and children. This resulted in a number of sociogenic, psychogenic, or biogenic theories that separate variables from one level of organization from variables at other levels. Relational perspectives, on the other hand, emphasize the integrative and dynamic relations among variables at multiple levels of organization in offering theoretical explanations for human development processes (Gottlieb, 2009). This focus is especially well-reflected in the Developmental Systems Theories (DST) of human development (Ford & Lerner, 1992).

Developmental systems perspectives offer integrative, holistic conceptions of the relations between variables at one level (e.g., the individual) and the variables at other ecological levels of human development (e.g., neighborhood). It is crucial to note that within a developmental systems perspective, the individual-context relation is bidirectional, i.e., individuals influence their environment and are in turn influenced by their surrounding ecological contexts. In other words, DST postulates that the development of an individual transpires from myriad interactions across system levels, from macro (e.g., culture and society) to molecular levels of functioning, and is influenced by the interplay of processes within and between individuals and their contexts (Lerner & Castellino, 2002).

From this perspective, SES constitutes relations among variables at individual, societal, and cultural levels of organization. Developmental systems scholars therefore recommend that research aiming to understand the impacts of SES-related adversity on parenting and child outcomes should focus on the study of developmental change within multiple ecological systems such as the family, peer, school, and neighborhood contexts (Hoff et al., 2012; Lerner, 2012;

Leventhal & Brooks-Gunn, 2012). Key questions consistent with this approach might include how SES-related variables interact with individual variables across time, and what conditions within the developmental system moderate the relations between SES-related variables and individual-psychological variables (Lerner, 2012). Consistent with these recommendations, this dissertation incorporates both individual-level and contextual variables within a longitudinal study design in its aim of assessing parental and youth resilience in the context of socioeconomic adversity.

Developmental Resilience Theory

Developmental resilience is broadly understood to reflect patterns of positive adaptation in the context of adversity (Masten & Barnes, 2018). Although the construct of “resilience” has cycled through numerous definitions (most notably resulting from debates surrounding resilience as a capacity, a process, or an outcome) resilience research has more recently reflected a shift towards an understanding that is more consistent with a developmental systems perspective. The most widely accepted definition of resilience is “the capacity of a system to adapt successfully to challenges that threaten the function, survival, or future development of the system” (Masten, 2014a, 2015). This definition reflects the dynamic nature of resilience as a *process* of interactions between the individual and their context, that is scalable across system levels, and ultimately leads to adaptive outcomes (Lerner et al., 2013; Masten & Barnes, 2018). In fact, resilience theory posits that individuals’ substantial capacity for adaptation to adversity is partly due to the fact that resilience depends on many interacting systems that confer adaptive advantages (Masten & Barnes, 2018). With the knowledge that socioeconomic adversity exerts a negative impact on youth outcomes through its effects on more proximal environmental contexts, as highlighted by the FSM (Conger et al., 2010), it is also these proximal person-environment interactions and circumstances that may provide “compensatory” factors that facilitate resilient functioning in the context of risk (Felner & DeVries, 2013). These compensatory factors may be protective in their own right or may provide developmental experiences that facilitate individual competencies in youth, or that allow for the potential of positive outcomes. Therefore, in the context of adversity, children are often protected by multiple resilience systems that might be embedded in their relationships with other individuals in their home and surrounding environments. By examining resilience systems at the individual, familial, and broader contextual levels, the proposed papers comprising this dissertation remain theoretically in line with the current wave of resilience research.

The idea of facilitating positive change across multiple systems is emphasized within both developmental systems as well as developmental resilience frameworks and is the crux of the “two-generation” approach. This approach asserts that strengthening the resources and capabilities of parents in order to foster healthy and competent development in children should be a key priority (Shonkoff & Fisher, 2013). Originating within the field of intervention, the two-generation approach highlights the need to provide integrated services to both parents and children to simultaneously address issues associated with parenting at risk, as well as provide quality early childhood care and education (Chase-Lansdale & Brooks-Gunn, 2014). In order to inform intervention efforts grounded in this model, research aiming to identify factors that change the behavior of parents and ultimately facilitate adaptive behavior in children is particularly needed. The current dissertation leverages this two-generation approach with the aim of informing intervention and policy efforts targeting youth and families experiencing socioeconomic adversity.

Brief Dissertation Overview

Based in these theoretical frameworks, the overarching goal of this dissertation is to identify protective factors that can be leveraged to promote positive cascades for youth in the context of socioeconomic adversity. Given the conflicting findings that effective parenting is one of the most crucial adaptive systems that supports positive outcomes in at-risk youth (Masten, 2015; Wright et al., 2013), but that competent parenting is severely compromised in families experiencing socioeconomic adversity (Conger et al., 1994, 2010; Conger & Conger, 2008), the broad aims of this dissertation are to: i) pinpoint protective factors that facilitate parental resilience, or the capacity of parents to deliver competent and high-quality parenting to children despite the presence of risk factors (Gavidia-Payne et al., 2015), in the context of socioeconomic adversity, and ii) assess whether positive parenting in turn both buffers adolescents from the risky outcomes, as well as facilitates wellbeing, in the same context.

Specifically, this article-style dissertation consists of two papers that leverage data from the Fragile Families and Child Wellbeing Study (FFCWS; Reichman et al., 2001) to understand cascading resilience processes in both parents and youth facing socioeconomic adversity. The FFCWS is a large diverse national sample of low-income families, that include married, cohabiting, and single-mother households (with cohabiting and single mothers disproportionately represented). *Paper 1* examines whether mothers’ social capital buffers the longitudinal effects of

socioeconomic adversity on positive parenting behaviors across time. Building on Paper 1, *Paper 2* aims to a) assess the indirect effects of socioeconomic adversity on adolescent substance use and adolescent wellbeing through the mediating pathway of child self-regulation, and b) examine whether positive parenting moderates the indirect effects of socioeconomic adversity on adolescent substance use and wellbeing.

Importantly, both papers aim to address key gaps in the literature by: 1) adopting a resilience rather than deficit approach to studying low-income families that have a high risk of experiencing socioeconomic adversity, 2) assessing factors that facilitate parental resilience in the context of socioeconomic risks, and 3) conceptualizing optimal adolescent adjustment as not just a lack of negative outcomes, but also the presence of flourishing outcomes such as happiness, optimism, and connectedness. Additionally, the papers in this dissertation remain consistent with key developmental theories by incorporating the interactions of multiple contexts (i.e., individual, familial, and community factors) across time in the study of parent and youth resilience and wellbeing. Finally, both papers optimize on the ethnically diverse sample of youth represented in the FFCWS and aim to contribute to the broader understanding of associations between socioeconomic adversity, positive parenting, and adolescent adjustment in non-Hispanic Black, Hispanic, and non-Hispanic White families.

Socioeconomic Adversity

Conceptualization and Measurement

Decades of research have established that experiencing poverty during childhood is strongly associated with health and wellbeing outcomes in children that last well into adolescence (Brooks-Gunn & Duncan, 1997; Duncan et al., 2012). However, despite the near-universal agreement regarding the negatively impacted developmental trajectories of children exposed to low-SES environments, appropriate measures for defining and assessing poverty continue to be extensively debated. This is because income poverty is known to be correlated with a multitude of additional social adversities that are equally detrimental to children (Aber et al., 1997; Anand et al., 2019), which makes it difficult to disentangle the effects of financial hardship from that of other detrimental social conditions such as occupation and education. Proponents of the FSM have therefore stressed the importance of measuring economic stress in more comprehensive ways in

order to understand the various kinds of economic hardships that influence parenting and youth outcomes (Conger et al., 2010; Conger & Conger, 2008; Gershoff et al., 2007).

Researchers concur that the extent to which a child's environment facilitates or hinders their developmental potential is largely determined by factors that comprise SES measures (Brooks-Gunn et al., 1999). These measures may include some combination of parental education and occupation, household/parental income, marital status, and employment status. However, the dominant poverty literature tends to use household income as the main proxy for measuring the effects of socioeconomic disadvantage on child development and wellbeing (Shelleby, 2018), despite evidence that measuring economic distress with income alone fails to capture the heterogeneity in adversities that families with similar incomes may experience (Felner & DeVries, 2013; Gershoff et al., 2007).

Specifically, since children are particularly vulnerable to the lasting impacts of early *cumulative* adversity, researchers have suggested using a broader definition of socioeconomic adversity, one that encompasses not just economic factors, but also social and familial ones (Anand et al., 2019). This approach may be a way to identify high-risk groups, who are more in need of interventions to reduce the impact of early adversity. That is, where a single indicator may not be able to capture the cumulative negative effects of experiencing financial, social, physical, emotional, and material hardships, a more holistic measure would take into account context-specific factors that are specific to different populations. In fact, researchers have documented that although family income often accounts for the greatest amount of variance in child outcomes compared to other SES indicators, SES measures that incorporate two or more indicators accounted for more variance than a single indicator (Bradley & Corwyn, 2002). This may be because emerging research suggests that the dynamic dimensions of SES and SES-related risks are subjectively perceived by families to be highly stressful (Raver et al., 2015). Therefore, although extant research has demonstrated the respective detrimental consequences of each type of SES-related adversity, their combined effects on child and family wellbeing may be less well known. This raises the necessity for research that assesses the long-term effects of a composite measure of socioeconomic adversity on youth and family outcomes. Recent research suggests that the five variables that significantly contribute to socioeconomic adversity during early childhood include marital status, household structure, education, income, and health insurance (Anand et al., 2019).

It is important to note that the *timing* of socioeconomic adversity is also particularly crucial for determining later developmental impacts. That is, the influence of poverty and related adversities varies as a function of the timing of exposure. Seminal work in this area suggests that a family's economic condition in early childhood may matter more for later development than their economic condition during adolescence (Brooks-Gunn & Duncan, 1997), since children below five years of age are especially sensitive to the lifelong effects of early adversity (Shonkoff et al., 2012). Subsequent research has confirmed this, with researchers reporting that poverty experienced between birth and age five has a significantly greater effect on children's academic outcomes than poverty experienced later on in childhood (Chaudry & Wimer, 2016).

Additionally, the *chronicity* of exposure to poverty has been found to be equally crucial in determining long-term negative impacts on child and adolescent outcomes (Brooks-Gunn & Duncan, 1997). Chronic poverty during childhood, or poverty experienced over longer periods of time, is considered to be a stronger predictor of negative outcomes such as academic success, externalizing behaviors, and employment outcomes and health, later on in adolescence and adulthood (Ratcliffe & McKernan, 2010, 2012; Wagmiller et al., 2006). In fact, researchers have found that each successive year spent in poverty negatively impacts children's executive functioning even after controlling for the extent of poverty and hardships experienced by families earlier on in the child's life (Raver et al., 2013).

Although SES remains a primary focus of interest to child and family wellbeing scholars, the field struggles to capture the dynamic, fluid, and multifaceted nature of poverty and its ecological cofactors. An abundant amount of research assessing SES-related risks continues to measure socioeconomic adversity or poverty by using a single indicator (typically income), at a single time point. However, the findings summarized in this section suggest that key metrics to consider when defining and measuring socioeconomic adversity include the *cumulative* nature of co-occurring SES-risks, and the *developmental timing* and *chronicity* of exposure to socioeconomic adversity. In line with these recommendations, the current dissertation aims to create a composite measure of socioeconomic adversity using multiple indicators of economic hardship, with a focus on early childhood, and taps into chronic socioeconomic adversity by accounting for these factors across a longitudinal period.

Race-Ethnic Differences in Experiences of Socioeconomic Adversity

Although the adverse impacts of low socioeconomic status on family processes and youth outcomes are ubiquitous across race-ethnic groups, research has established that there are nuances in the experiences of socioeconomic adversity and the pathways of effects on youth adjustment for families of different races. This section briefly highlights variations in experiences of socioeconomic adversity, with a focus on Black and Hispanic families in the U.S.

Researchers have found that among children of U.S.-born parents, Black and Hispanic children are exposed to a greater number of adverse experiences in general relative to White children (Slopen et al., 2016). Data on absolute poverty, as measured purely by wealth, show stark differences across racial groups, with Black households earning 6 cents and Hispanic households 7 cents for every dollar of wealth that White households have (Semega et al., 2019). These disparities persist across the SES spectrum, as Black and Hispanic individuals receive less income at the same education levels, have less wealth at equivalent income levels, and lower purchasing power due to the higher costs of goods in services in residential areas they are disproportionately located in (Williams et al., 2010, 2016). Black children are also more likely to experience persistent poverty than other racial and ethnic groups (Chaudry & Wimer, 2016), which is particularly relevant to this dissertation because the persistence of poverty during childhood is associated with worse adolescent and adult outcomes later on (Duncan et al., 2010; Ratcliffe & McKernan, 2012). This disparity of adversity at the same income level is further emphasized by the finding that Black Americans are more likely than White Americans to report experiencing economic hardships such as being unable to pay full rent and having utilities shut off, even after controlling for demographic, SES, and health status factors that should have accounted for the differences (Bauman, 1998).

Racial-ethnic minority families are overrepresented in harmful residential and occupational environments that lead to a heightened risk of exposure to extreme stressors such as crime, violence, loss of loved ones, and material deprivation, along with financial strain, relationship conflicts, and unemployment (Williams et al., 2016). They are therefore more likely to experience not only higher levels of multiple contextual stressors, but also greater clustering of stressors than White families (Sternthal et al., 2011). Chetty and colleagues (2016) have also shown that the correlation between growing up in a low-poverty neighborhood and income is stronger for White than Black boys, suggesting that “good neighborhoods” may not be equally protective across races. Instead, for Black boys it is higher rates of father presence in their families, and lower levels of racial bias

among White families in their neighborhood, that are associated with better outcomes (Chetty et al., 2020). It is also interesting to note that racial-ethnic minority families often do not enjoy the same returns in health from higher levels of education and income than White individuals do; a phenomenon known as “John Henryism” in which although higher education is associated with higher income in Black Americans, they report poorer physiological health despite their higher SES levels (Farmer & Ferraro, 2005; Traub & Boynton-Jarrett, 2017). These findings together suggest that experiences of socioeconomic adversity are not equivalent across race-ethnic lines, even holding major SES indicators such as education and income constant. Therefore, it is crucial that measures of socioeconomic adversity, when applied to ethnically diverse samples, are constructed in such a way that they are valid within each subgroup, while remaining sensitive to the diverse manifestations of socioeconomic adversity across different family types.

Impact on Youth Development

There is an unequivocal relationship between socioeconomic adversity and the health and wellbeing of youth (Aber et al., 1997; Bradley & Corwyn, 2002; Duncan et al., 2010; Eamon, 2001). A meta-analysis analyzing the associations between a composite measure of SES and child outcomes revealed that low SES is associated with adverse impacts on children’s language and literacy, aggression, and internalizing behaviors (Letourneau et al., 2013). Exposure to socioeconomic disadvantage has also been linked to poor academic outcomes, compromised self-regulation and executive functioning (Duran et al., 2020; O’Connor et al., 2019), mental health concerns (Reiss, 2013), and problem behavior (Carter et al., 2010). Additionally, children from low-income families are more likely to experience serious complications from health conditions, likely due to lower quality healthcare, less access to healthcare resources, and lack of medical insurance (Duncan et al., 2010; Wickrama et al., 2015). Despite the evidence indicating that a disproportionate number of racial-ethnic minority children are exposed to socioeconomic disadvantage, race-ethnically diverse families remain underrepresented in the literature assessing the effects of SES-related risks on child outcomes. Of the research that has been conducted, similarly negative cognitive, behavioral, academic, and socioemotional outcomes have been documented in Hispanic (Mistry et al., 2008) and Black children (McLoyd, 1998) from low-income families.

A number of researchers have corroborated the FSM perspective that early experiences of socioeconomic adversity during childhood are associated with poorer developmental outcomes later on in adolescence (Conger et al., 1999). Specifically, in adolescence socioeconomic adversity has been linked to higher rates of substance use, externalizing problems, and depression (Assari et al., 2018; Doan et al., 2012; Goodman et al., 2005; Sariaslan et al., 2014). Additionally, lower SES has been linked to higher levels of emotional and behavioral difficulties such as social problems, delinquent behavior and conduct problems, and attentional concerns in adolescents (DeCarlo et al., 2011; Russell et al., 2016; L. G. Simons et al., 2016). Researchers have also documented associations between socioeconomic disadvantage and adolescents' use of tobacco, alcohol, and illicit drugs, as well as episodic heavy drinking (Hardaway & Cornelius, 2014; J. O. Lee et al., 2018; C. C. Martin, 2019; Pampel et al., 2010), and higher levels of adolescents' allostatic load (Gallo et al., 2019). Recent research supporting the FSM have shown that economic hardship also adversely affects academic engagement in adolescence (L. G. Simons & Steele, 2020). Finally, along with negative outcomes documented, researchers have also revealed the negative effects of socioeconomic adversity on adolescent wellbeing outcomes such as positivity (Jeon & Neppl, 2016; Neppl et al., 2015), happiness, optimism, and hope (Burton & Phipps, 2008; Vacek et al., 2010; Yin et al., 2019) and life satisfaction and self-esteem (W. Chen et al., 2016).

Although the research assessing the impacts of socioeconomic adversity on adolescent adjustment is not limited, there are a few gaps that the papers in this dissertation aim to fill. First, most of the literature assessing adolescent adjustment in this context has focused on cross-sectional samples, with very few assessing the longitudinal impacts of *early* socioeconomic adversity on adolescent adjustment. Second, few researchers have assessed both risky outcomes as well as flourishing outcomes simultaneously in the context of adversity – an approach that affords a more holistic view of adolescent adjustment in the context of socioeconomic adversity and allows the researcher to better understand the role of protective factors in both mitigating risk as well as fostering flourishing in this context. Last, although the impacts of socioeconomic adversity on adolescent adjustment have been separately examined in different race-ethnic populations, the FFCWS sample allows multi-group analyses of the same processes within the three main race-ethnic groups in the U.S.; i.e., non-Hispanic Black, Hispanic, and non-Hispanic White families.

The FFCWS Sample: Families at Risk of Experiencing Socioeconomic Adversity

Single- and cohabiting-mother families (also referred to as ‘mother-headed families’ within this dissertation) are known to disproportionately experience socioeconomic adversity. The FFCWS is a sample in which three-quarters of the children were born to unwed parents. In the study, the term “fragile families” is used to refer to families that are formed as a result of a non-marital birth, which may include non-cohabiting, or single, mothers, as well as cohabiting couples. These families may be especially vulnerable to poorer parent and child outcomes due to a number of factors, including the fewer sources of economic support at their disposal and their increased likelihood of experiencing notable material hardships, as well as due to father absences and family instability (Kalil & Ryan, 2010). This section briefly outlines the challenges unique to single- and cohabiting-mother families, with a special focus on the economic challenges they face.

Research from the FFCWS has documented that both single mothers and cohabiting couples with children are disproportionately more likely to experience economic disadvantages compared to married two-parent families (e.g., McLanahan, 2009). For instance, the annual household income of single mothers (as well as cohabiting mothers) in the FFCWS is notably lower than that of married mothers’ annual household incomes (Kalil & Ryan, 2010). Additionally, Teitler and colleagues documented that more than half of the single and cohabiting mothers in this sample reported experiencing at least one type of material hardship, including concerns regarding the ability to pay bills and afford essential utilities and services, and in extreme cases, utility shut-offs, eviction, hunger, or insufficient medical care (Teitler et al., 2004). When considering why families led by single mothers are disproportionately economically disadvantaged, it is important to note that single mothers are more likely to have less education and are disproportionately younger than married mothers (Mather, 2010); two factors that significantly contribute to their lowered earning capacity. Single and cohabiting mothers are also less likely to have assets, such as owned property, that may help cushion unexpected financial hardships (Barr & Blank, 2009). Finally, the high rates of relationship dissolution and frequent changes in living arrangements may be another key factor contributing to the economic instability of mothers in families that are formed as a result of a non-marital birth (Kalil & Ryan, 2010).

For single mothers specifically, high levels of economic stress faced are further compounded by everyday hassles, social isolation, as well as emotional strains resulting from the demands of raising a child without the support of a co-parent (Murry et al., 2001; Taylor & Conger,

2017). Researchers have demonstrated that the role strain resulting from the dual demands of being a primary wage-earner as well as primary caregiver has a notable impact on stress processes in samples of ethnically diverse single-mother families (Mistry et al., 2002; Taylor et al., 2010; Taylor, Jochem, et al., 2012). That is, competing work and childcare demands have been shown to increase work-family conflict, negatively impact family routines, and increase maternal internalizing concerns (McLoyd et al., 2008). In contrast, while cohabiting families have two parents and therefore often live in dual-income households, literature has found that these families often have similar sociodemographic profiles to single-mother households, including a higher likelihood to be living at or below the poverty line and to rely on public health insurance (Manning, 2015), comparable employment patterns (Percheski, 2018), and lower educational attainment levels (Livingston, 2018). Children living in cohabiting-mother families are also more likely to be exposed to frequent relationship transitions and patterns of instability, and researchers have found that this may be particularly true among Black families (S. L. Brown et al., 2016).

Taken together, these stressors can result in both single mothers and cohabiting mothers having a greater likelihood of experiencing emotional distress which, consistent with the FSM, can lead to disruptions in effective parenting. Researchers have documented that children from single-mother households are at an increased risk of poor developmental outcomes due to mothers experiencing higher levels of socioeconomic adversity that result in higher parental distress and harsh or maladaptive parenting behaviors (Taylor & Conger, 2014). For instance, single mothers' economic pressures and internalizing problems were associated with lower levels of maternal warmth and effective child management practices over time (Taylor et al., 2010). Additionally, frequent family transitions and relationship churning (i.e., breaking up and getting back together with the same partner), which tend to be more common in cohabiting relationships (S. L. Brown et al., 2016; Vennum et al., 2014), has been linked to higher levels of maternal stress and harsh parenting (Beck et al., 2010; Halpern-Meekin & Turney, 2016; McLanahan, 2011). Overall, distressed parents have additionally been observed to be less affectionate with their children, and report feeling less effective and capable in disciplinary interactions with them (Mistry et al., 2002).

It is important to note here that single motherhood is not implicated as a *cause* of poorer socioeconomic contexts, but rather that it often *coincides* with greater socioeconomic disadvantages (Damaske et al., 2017; McLanahan & Jacobsen, 2015), which in turn is linked to poorer child outcomes through family stress processes outlined in the FSM. Therefore, research

aiming to uncover factors that mitigate the effects of the disproportionate socioeconomic risks faced by mother-headed families is particularly needed. However, despite an extensive body of research documenting these risks and negative outcomes, relatively few studies have focused on resilience processes or protective factors that may buffer single and cohabiting mothers and their children from the adverse experiences they are exposed to (for exceptions see Murry et al., 2001; Taylor et al., 2010, 2012). Given the cascading risks outlined in this section, it is crucial for research to take a resilience-based approach in examining factors that may disrupt these stress processes and promote positive parenting and child outcomes within this context. Research focused on single-mother families has traditionally compared them to married families, therefore potentially missing any within-group differences that might exist (Taylor & Conger, 2014). Additionally, single- and cohabiting-mother families of different racial backgrounds are likely to experience different risk and resilience processes (Damaske et al., 2017; Mather, 2010) and therefore deserve to be examined separately in order to better inform interventions with diverse populations. Finally, in line with the developmental systems perspective, it is important to consider the multiple integrated ecological contexts that may influence youth outcomes in the context of these families. Few studies have taken this approach in understanding the wellbeing of youth in mother-headed families, especially in examining resilience processes across time. The current dissertation aims to address these gaps in the literature on low-income families by taking a two-generation approach in identifying potential protective factors that may buffer stress processes over time in a predominantly unwed sample.

Parenting in the Context of Socioeconomic Adversity

The detrimental impact of socioeconomic adversity on youth outcomes often occurs through the mediating pathways of more proximal familial influences; most notably parenting, as posited by the FSM as well as by developmental systems theories (Conger & Conger, 2008; Lerner, 2012). Poverty and its correlates pose harmful threats to competent parenting through impacts on parental distress and mental health. The FSM posits that economic hardships detrimentally effect parents' mental health, disrupt interparental or marital relationships, and compromises parents' abilities to engage in supportive, nurturing parenting behavior with children (leading parents to rely more heavily on harsher and more inconsistent parenting practices; Conger et al., 2010; Conger & Donnellan, 2007; Masarik & Conger, 2017; McLoyd et al., 2014). These pathways have

been substantiated by researchers. For instance, researchers have found that economic pressures among families of varying ethnicities and structures were associated with parental distress including, but not limited to, depressive symptoms, feelings of discouragement and hopelessness, anxiety, and hostility (Hardaway & Cornelius, 2014; Landers-Potts et al., 2015; Newland et al., 2013; Ponnet, 2014). Similarly, researchers have also found evidence in support of the pathway linking parental distress to higher levels of conflict, less support, and lower relationship satisfaction within interparental and marital relationships (Helms et al., 2014; T. K. Lee et al., 2013; Neppl et al., 2016; O'Neal et al., 2015). Finally, parental distress and interparental relationship problems have been found to uniquely contribute to reductions in the quality and amount of time spent with two-year-old children, lessened provision of social and cognitive enrichments children aged 5, harsh parenting towards children aged 6-10, and hostile parenting behaviors towards adolescents over time (Iruka et al., 2012; Landers-Potts et al., 2015; Neppl et al., 2016; Nievar et al., 2014; Ponnet, 2014; L. G. Simons et al., 2016).

Researchers have additionally tested the FSM pathway in its entirety and found longitudinal evidence substantiating the associations between economic pressures, parental distress, harsh parenting, and maladaptive youth outcomes over time (Gard et al., 2020; Neppl et al., 2016). Together these findings speak to the importance of parents' wellbeing and parenting behaviors as probable pathways linking socioeconomic adversity and youth functioning. This emphasizes the need to identify protective factors that facilitate competent parenting within this context.

Race-Ethnic Differences in Family Stress Processes

The FSM has been successfully replicated in families from a range of different racial and ethnic groups, including in Black, Hispanic, and Asian families (Conger et al., 2012; Emmen et al., 2013; McLoyd, 1990; L. G. Simons et al., 2016; Taylor et al., 2010; Taylor, Widaman, et al., 2012). However, researchers have found variations in family stress processes across different race-ethnic groups. For instance, higher material hardship was found to be more strongly associated with parenting stress for Black families compared to Hispanic and White families (Raver et al., 2007). Additionally, although economic hardship was linked to maternal depression, maternal depression did not lead directly to low nurturing or uninvolved parenting in Black American families as it did in White families (Conger et al., 2002). In a more recent study of Black families,

Lander-Potts and colleagues (2015) found that economic pressure impacted parenting only when caregiver conflict was high, and that the effect was not significant when caregiver conflict was low. Similarly, although the FSM has been generally replicated among Hispanic families, income has been found to be a weaker predictor of economic pressure in some samples of Hispanic parents compared to White parents, but Hispanic children were found to be more greatly impacted by inter-parental conflict (Parke et al., 2004).

Interestingly material hardship has been found to have a positive association with positive parenting in Black families, negative relation with positive parenting in White families, and no association with positive parenting in Hispanic families (Raver et al., 2007). This might suggest that economic factors may not always affect parenting across ethnic groups; however, research has shown that structural characteristics such as income and English language proficiency account for a majority of the variance in maternal stress in Hispanic families, while single-mother status and income were the strongest predictors of maternal stress in Black families (Nomaguchi & House, 2013). Cassells and Evans' (2017) work also highlights the role of non-economic factors such as family structure, depression, and neighborhood factors in determining parenting stress among race-ethnically minoritized mothers. Taken together, these findings suggest that there is heterogeneity in the factors contributing to parenting stress and parenting behaviors for each racial-ethnic group. Unpacking these nuances in the socioeconomic sources of parental stress and consequent outcomes for various racial-ethnic groups is necessary to deepen our understanding of how poverty differentially impacts parenting across contexts.

The Buffering Effects of Social Capital

Originally conceptualized at the society level, social capital traditionally refers to a combination of social organizations, networks, and civic participation having the potential to enhance the efficiency of society by facilitating coordinated action (Putnam et al., 1993). Although social capital is understood to be a form of cohesion at the societal level, it is also considered to be generated at the individual level through a person's ability to access the benefits of available social structures and networks (Portes, 1998). Grounded in these conceptualizations, the public health field views the construct as a notable determinant of health that includes both individual and community dimensions (Kawachi, 1999; Kawachi & Berkman, 2000). The social capital literature therefore relies on two approaches to measure the construct; one that taps into the

“network” or individual-level aspect, and another—more commonly used in public health research—that taps into “social cohesion” as a community-level asset (Kawachi, 2010). The social cohesion approach typically measures social capital using individuals’ perceptions of interpersonal trust, exchanges of support, as well as social participation and forms of informal social control (Eriksson, 2011; Kawachi, 2010). It is important to note that, consistent with a developmental systems approach, inherent in this conceptualization of social capital is the assumption of bidirectionality or reciprocity between individuals and their surrounding context; in this case, the communities they live in. This dissertation therefore operationalizes social capital as individuals’ levels of social support, trust, and participation, and their perceptions of neighborhood social cohesion and control.

There has been considerable evidence linking social capital to individual health and wellbeing (Eriksson, 2011; Giordano et al., 2013; Kunitz, 2004; Schultz et al., 2008; Snelgrove et al., 2009). Particularly relevant to this dissertation, however, is the research suggesting that social capital acts as a buffer against adverse outcomes related to socioeconomic adversity for women and mothers in low-income communities (Dauner et al., 2015; Domínguez & Watkins, 2003; Kalil & Ryan, 2010; Manuel et al., 2012). According to Kawachi and Berkman (2000), social capital acts as a stress-buffering mechanism by providing vulnerable individuals with emotional and instrumental support that allows them to perceive challenging events as being less stressful. As the types of social capital are often distinguished in the literature, this section presents a brief overview of the research assessing the protective effects of social support (including trust and participation) and neighborhood social capital (including cohesion and control) separately. However, it should be noted that these dimensions often overlap and can have integrated effects on parenting and child outcomes when considered together.

Two types of social support that are typically linked to parents’ health and wellbeing are *emotional* support, which includes companionship and intimacy, and *instrumental* support, which includes financial support as well as tangible support such as providing childcare. A vast body of research has demonstrated that social support is associated with parents’ mental and physical health, coping, emotion regulation, and self-efficacy (e.g., C.-Y. S. Lee et al., 2009; L. C. Lee et al., 2006). Higher emotional support from social networks has additionally been linked to higher maternal-child responsiveness and increased cognitive stimulation among low-income families (Burchinal et al., 1996). Most importantly, perceived social support has been found to buffer the

impacts of stress associated with financial hardship, and foster positive parenting behaviors in that context (McConnell et al., 2011).

Using national survey data, researchers have documented that social support enhances parental wellbeing and buffers the effects of maternal depression on child behavior problems (L. C. Lee et al., 2006). With regard to single mothers in particular, those who perceive support from family members report improved psychological adjustment, increased self-efficacy, and higher quality parenting, which in turn is associated with positive child outcomes (Murry et al., 2001). Additionally, research examining the buffering effects of social support for mothers experiencing material hardship found that higher levels of social support was negatively associated with parental stress (S. Zhang et al., 2015). Research assessing support from friends has found that it is associated positively with mothers' life satisfaction and fulfillment, and negatively with stress, emptiness, depression, anxiety, and loneliness (Luthar & Ciciolla, 2015). Of note, is that perceived emotional support has repeatedly been found to have a stronger buffering effect for low-income single mothers relative to tangible instrumental support (Manuel et al., 2012; Taylor & Conger, 2017) suggesting that, lacking emotional support may be especially detrimental to parenting and child outcomes in mother-headed families.

Forms of neighborhood social capital can include informal social control (the degree to which neighbors collectively monitor and supervise children) as well as social cohesion and trust (e.g., the willingness of neighbors to work together to solve problems) (Dorsey & Forehand, 2003). Research investigating the role of neighborhood social capital on parental wellbeing suggests that women caregivers are particularly likely to rely on neighbor networks in efforts to tackle daily tasks and achieve optimal outcomes for themselves, their children, and other family members (Domínguez & Watkins, 2003). Researchers have found that low social capital within the neighborhood is associated with decreased parental support and monitoring (Dorsey & Forehand, 2003; R. L. Simons et al., 1993). Relatedly, parents' perceptions of low social capital are associated indirectly with increased levels of child behavior problems through the mediating role of decreased parental support and solicitation (Vieno et al., 2010).

Complementing this, perceptions of positive neighborhood characteristics have been linked to positive parenting outcomes in the context of adversity. For instance, higher levels of social cohesion and control have been linked to greater social support, which was in turn linked to more effective parenting (Byrnes & Miller, 2012; Maguire-Jack & Wang, 2016), and mothers with more

favorable perceptions of neighborhood support and safety were more likely to engage in more interactive parenting behaviors (Kenney, 2012). Similarly, in a study evaluating the role of neighborhood contexts within an FSM framework, social cohesion and control were both found to be positively associated with children's cognitive development through lessened parental stress (Choi et al., 2018). Researchers have also found that neighborhood collective efficacy may be particularly protective in the context of family stress processes for Hispanic low-income families (Ma & Klein, 2018), which could be due to ethnic minority mothers' increased risk for social isolation, acculturation stress, and language hassles. Similarly, social support and kin networks are suggested to play an especially important buffering role for low-income Black mothers (McLoyd, 1990; Riina et al., 2016; G. Wallace, 2013).

Given these promising findings regarding the buffering effects social capital has in the context of family stress processes, it may be an important factor that contributes to parental resilience (i.e., the capacity to display effective parenting behaviors despite the presence of risks; Gavidia-Payne et al., 2015), in the context of families experiencing socioeconomic adversity. It is crucial to pinpoint such factors in order to facilitate positive parenting in this context.

Positive Parenting and Youth Adjustment

Parenting research addresses both what parents do (i.e., parenting practices) as well as how they do it (i.e., parenting quality; Darling & Steinberg, 1993). 'Positive parenting' in the context of this dissertation, is operationalized as a blend of competent parenting practices as well as effective parenting quality. Specifically, research on positive parenting asserts that effective and competent parents show high levels of warmth, responsiveness, acceptance, and support, and low levels of harshness or punitiveness (Maccoby & Martin, 1983). Decades of parenting literature suggest that children who are exposed to high levels of nurturance combined with moderate-to-high levels of control appropriate to their developmental stage are likely to develop into competent individuals (Baumrind et al., 2010; Maccoby & Martin, 1983). More specifically, recent reviews of the literature have found that positive parenting is linked to key positive youth outcomes such as lower mental health and behavior problems and increased academic, peer, and social competence (Pinquart, 2017a, 2017b; Schofield et al., 2016). Importantly, having a warm and supportive parent has consistently been demonstrated to promote adaptive development, and protect children from negative outcomes, in the context of adversity (Masten, 2015). In fact,

reviews of the resilience literature have shown responsive and supportive parenting to be the single most robust predictor of resilient outcomes in the context of a broad range of environmental adversities (Luthar, Grossman, & Small, 2015).

Despite the overwhelming evidence supporting family stress processes as posited by the FSM, researchers have also shown that positive parenting in the context of adversity has the potential to buffer youth from the detrimental impacts of economic hardship (Jeon & Neppl, 2019; Taylor et al., 2010; Taylor, Jochem, et al., 2012). Positive parenting has been found to be especially important in the context of early adversities, as early childhood is well-known to be a vulnerable period of development when children are especially susceptible to stressors (Shonkoff et al., 2012). Positive parenting is considered to play a crucial role in buffering children from the effects of toxic stress caused by early adversity. For instance, in a sample of diverse low-income infants, Blair and colleagues (2011) found that positive parenting was inversely linked to cortisol levels at baseline after a standardized stressful event. Relatedly, researchers have found that positive parenting practices mitigate the negative effects of adverse childhood experiences (ACEs) on children's socioemotional development (Yamaoka & Bard, 2019). Therefore, it is especially important to consider the buffering role positive parenting may play in the context of youth who are exposed to adversity during their first few years.

In the context of adverse life events and neighborhood disadvantage, positive parenting was found to buffer children from internalizing and externalizing problems (Flouri et al., 2015). With regard to socioeconomic adversities specifically, research has shown that positive parenting behaviors are linked to positive child behavior and adolescent positive adaptation into young adulthood, despite exposure to economic pressures (Jeon & Neppl, 2016; Neppl et al., 2015). Similarly, in testing the FSM within a resilience framework with the same sample, researchers Jeon and Neppl (2019) found that in spite of economic hardship, mothers' responsiveness, communication, and positive affect was linked to child social competence. Warm and nurturing parenting has also been shown to reduce the physiological wear and tear caused by low SES in children (E. Chen et al., 2011; Evans et al., 2007). Additionally, warm and competent parenting has been found to moderate the effects of SES, family poverty, and neighborhood disadvantage on young children's emotional and behavioral functioning (Burchinal et al., 1996; Dearing, 2004; Kim-Cohen et al., 2004; Malmberg & Flouri, 2011).

Parenting practices that include non-harsh discipline, positive reinforcement, consistency, and warmth, have been found to buffer children in the context of poverty, predicting emotional competence (Stack et al., 2010), school achievement (Kiernan & Mensah, 2011), and decreased problem behavior (Galambos et al., 2003). Positive parenting has also been found to play a role in adolescent risky behavior and externalizing problems in the context of economic pressure. That is, research suggests that supportive parenting prevents risky behavior such as alcohol and nicotine use in adolescents exposed to family economic pressure (Kwon & Wickrama, 2014), and that positive parenting practices buffer adolescents from externalizing psychopathology in the context of a variety of environmental stressors, including poverty (Brumley & Jaffee, 2016). For youth living in poverty, research demonstrates that parental monitoring may be a particularly essential protective aspect of positive parenting (DeVore & Ginsburg, 2005). The body of extant literature reviewed provides strong evidence for both the promotive and protective effects of positive parenting in the context of youth exposed to adversity. From a public health perspective, positive parenting is a crucial modifiable resilience factor that can be leveraged as a point of intervention for vulnerable families (Traub & Boynton-Jarrett, 2017). Therefore, research assessing factors that facilitate positive parenting in contexts for which competent parenting is at risk is particularly important, as is research that assesses its buffering effects in youth growing up in fragile families.

It is important to note that positive parenting, as characterized by warm, supportive behaviors as well as consistent discipline and a lack of harshness, has universally been found to support positive youth adaptation across diverse race-ethnic contexts in the U.S. (Bámaca-Colbert et al., 2018; Brody et al., 1999, 2001; Conger et al., 1992; Leidy et al., 2010; Murry et al., 2001; Taylor et al., 2015). However, researchers have increasingly begun to note that parenting characterized by high warmth coupled with harsher levels of discipline, referred to as “no-nonsense” parenting (Brody & Flor, 1998) may be particularly protective for Black and Hispanic youth (Mahrer et al., 2019; Steele et al., 2005; White et al., 2013). It is therefore important to assess the effects of positive parenting separately for youth from different race-ethnicities, as there may be differential protective processes at play.

Adolescent Adjustment in the Context of Socioeconomic Adversity

Adolescence has been characterized as a time of transition, risk, and plasticity (Monahan et al., 2016), one that is particularly vulnerable to the influences of cumulative risk (Buehler &

Gerard, 2013; January et al., 2017). As documented so far in this chapter, families experiencing socioeconomic adversity are typically exposed to multiple co-occurring risks which trigger cascading stress processes that ultimately hamper youth development. The current dissertation takes a holistic approach to assessing adolescent adjustment by examining indicators of both maladjustment (i.e., substance use) as well as wellbeing (i.e., happiness, optimism, connectedness) in the context of socioeconomic risk. Additionally, self-regulation is highlighted as a key developmental mechanism through which socioeconomic adversity may impact adolescent functioning. Specifically, since the accomplishment of self-regulation as a developmental task is known to be crucial to adolescent adjustment (as conceptualized by both the reduced likelihood of negative outcomes as well as the enhancement of flourishing outcomes) (Buckner et al., 2009; Robson et al., 2020) and is also known to be negatively impacted by chronic adversity (Johnson et al., 2016; Lackner et al., 2018), it is therefore assessed as a crucial mediating factor in the pathways to adolescent maladjustment and thriving in the context of socioeconomic adversity.

Adolescent Maladjustment: Substance Use

Adolescence is an especially critical developmental period in which to consider substance use as an indicator of maladjustment, due to the increased likelihood of engaging in risky behaviors (Steinberg, 2007) coupled with the finding that health behaviors developed during this period are likely to be maintained throughout the life course (Umberson et al., 2010). Specifically, adolescents are at a particularly heightened risk of substance use (Zucker, 2008), and research has demonstrated that using more than one type of substance during a specific period (polysubstance use) often emerges during adolescence (Tomczyk et al., 2016). Adolescent substance use has been associated with problematic drug use and several other psychosocial adjustment problems in adulthood (Irons et al., 2015), and polysubstance use in particular has been linked to even more severe adverse outcomes later in life (Kelly et al., 2015).

Exposure to socioeconomic adversity has been found to further exacerbate the existing risk of substance use during adolescence (Carliner et al., 2016; Hardaway & Cornelius, 2014; M. J. Martin et al., 2019; Melotti et al., 2011). For instance, a considerable body of research suggests that low SES is linked to higher alcohol and nicotine use (Evans & Kutcher, 2011; Hanson & Chen, 2007; Kwon & Wickrama, 2014; Melotti et al., 2011), with the prevalence of smoking being particularly high within socioeconomically disadvantaged youth (Cambron et al., 2018;

Poonawalla et al., 2014). However, the evidence is somewhat mixed, because although some studies show that key indicators of socioeconomic adversity such as lower parental education are associated with increased substance use (e.g., Bachman et al., 2011), others have reported that lower parental education is in fact linked to decreased adolescent substance use (Piko & Fitzpatrick, 2007; Ritterman et al., 2009). Similarly, high family income has been found to be uniquely protective against smoking but not alcohol use, suggesting that family-level socioeconomic factors may be particularly relevant for the development of early adolescent smoking (Cambron et al., 2018). There is also research suggesting that the strength of associations between socioeconomic correlates and substance use might substantially weaken during late adolescence (Bachman et al., 2011; J. M. Wallace et al., 2009), and it is not clear whether there is consistently a direct association between socioeconomic adversity and adolescent substance use (Bachman et al., 2011; Pampel et al., 2010).

To add to these inconsistencies, research evaluating differential substance use rates among youth from different race-ethnic backgrounds has revealed seemingly incongruent patterns. For one, substance use has consistently been found to be lower among Black youth compared to their Hispanic and non-Hispanic White peers (Bachman et al., 2011; Johnston et al., 2019; Warheit et al., 1996; Watt, 2005) despite their disproportionately high rates of exposure to poverty, material hardship, substance availability and other substance-use risk factors (J. M. Wallace, 1999; J. M. Wallace et al., 2009). Similarly, researchers note that, despite the high proportion of Hispanic youth who experience socioeconomic disadvantages (particularly, low levels of parent education), substance use among these youth appear to be notably lower than that of their non-Hispanic White peers facing similar socioeconomic risks (Bachman et al., 2011).

Therefore, associations between socioeconomic adversity and adolescent substance use are not straightforward and require further investigation. Assessing whether socioeconomic adversity is longitudinally associated with adolescent substance use in a nationally representative sample, with multi-group analyses across race-ethnic groups, is especially important to elucidate potential differences. Further, few studies have longitudinally assessed mediating mechanisms that may facilitate the development of substance use concerns in adolescents who experienced early socioeconomic adversity. Finally, to understand why some adolescents are more likely than others to engage in substance use after early exposure to socioeconomic adversity, it is also crucial to assess potential protective factors that may mitigate this developmental risk cascade.

Adolescent Thriving: Wellbeing

Although the literature tracking maladaptive trajectories of youth development in the context of socioeconomic adversity is extensive, research examining youth wellbeing in this context is less common. Wellbeing in adolescence can be conceptualized as flourishing outcomes resulting from the dynamic interplay between individual characteristics and the developmental context over time (Benson & Scales, 2009), a definition that is consistent with a developmental systems perspective of youth development. Research assessing wellbeing in adolescents who have experienced early socioeconomic adversity is particularly important due to the heavy deficit focus in the literature examining youth adjustment in high-risk populations, particularly among ethnic minority youth. Even research that assesses wellbeing in these samples often conceptualizes wellbeing as a lack of negative outcomes rather than the presence of positive, flourishing outcomes (e.g., Plenty & Mood, 2016). However, it is well established by now that wellbeing is reflective of positive functioning across multiple domains and implies the presence of strengths and resources rather than the mere absence of behavioral or psychological problems (Kern et al., 2016). Youth wellbeing is therefore multidimensional and comprises both objective as well as subjective components of health and wellbeing (Ryff, 1989, 2013). Specifically, researchers have conceptualized wellbeing as being reflective of an individual's quality of life (Statham & Chase, 2010), happiness (Pollard & Lee, 2002), and life satisfaction (Seligman, 2002).

Early investigations into the links between socioeconomic factors and youth wellbeing found positive associations between family income and youth happiness as well as subjective wellbeing (Burton & Phipps 2008; Ash & Huebner, 2002). McAuley and colleagues (2012) found that in families with the highest levels of lifestyle deprivation and the highest proportion of single parents, youth's self-reported happiness was the lowest. However, they also found that family stressors accounted for more of the total variance in youth happiness than the family's socioeconomic status, which could indicate that, consistent with the tenets of the FSM, the influence of socioeconomic adversity on youth wellbeing is mediated by more proximal family processes. Research also suggests that adolescents in families with a high SES tend to have more positive future-oriented goals and plans, whereas those from low SES families tend to have negative and vague expectations of the future (Schröder et al., 2011). This may reflect lower levels of hope and optimism among adolescents from families experiencing socioeconomic adversity, a finding that is echoed in Yin and colleagues' (2019) study of the impacts of family SES on

teenagers' hope. This association may be due to the limited material and social resources that families experiencing socioeconomic adversity can provide their children to facilitate future goals and development (Conger & Donnellan, 2007).

Researchers have also found a positive association between family affluence and life satisfaction in adolescents, but interestingly, note that *perceived* wealth was a much stronger determinant of teen life satisfaction compared to absolute wealth (Buijs et al., 2016). Complementing this, there is evidence to suggest that low SES may impact adolescents' life satisfaction through the mediating mechanism of self-esteem (Chen et al., 2016), suggesting that adolescents may be more aware of the gap between the rich and the poor than younger children and are therefore particularly vulnerable to low self-esteem in the context of their understanding of their own relative socioeconomic status (McLoyd et al., 2009). However, despite this evidence, some researchers have documented instances of low-income urban youth reporting relatively high life-satisfaction and showing no effects of stress on positive affect (such as optimism, hope, and self-esteem; Vacek et al., 2010). This finding is supported by the resilience literature, which suggests that youth can flourish despite exposure to adverse environments (Masten, 2014).

Self-Regulation as a Key Mechanism

Self-regulation can be defined as the set of intrinsic processes aimed at adjusting one's physiological and emotional states adaptively to meet contextual demands (Nigg, 2017). More specifically, self-regulation skills facilitate goal-oriented behavior and adaptive responses to emotionally and cognitively demanding stimuli through the effective regulation of thoughts, feelings, and behaviors (Posner et al., 2007). Two key processes that are involved in self-regulation include *automatic* regulation, referring to the rapid "fight or flight" response necessary in urgent or threatening situations, and *intentional* regulation, referring to conscious, planned, and proactive responses necessary for achieving goals (Blais et al., 2012; Blair & Ursache, 2011). It is important to note that these processes are widely acknowledged to exist on a continuum ranging from automatic (subconscious) to intentional (conscious) self-regulation (Gestsdóttir & Lerner, 2008), with adaptive responses and functioning relying on an optimal balance between the two processes (Center on the Developing Child at Harvard University, 2016). However, the current dissertation focuses exclusively on the role of intentional self-regulation (sometimes referred to as "top-down"

processing) involving higher-order cognitive abilities such as attention and goal-oriented volitional behavior, in adjustment.

Developmental Timing of Self-Regulation

Intentional self-regulation involves the ability to inhibit an automatic response in favor of a responses that is more appropriate for a given situation (Rothbart & Bates, 2006) and requires fundamental ‘executive functioning’ processes such as working memory, inhibitory control, and mental flexibility. The foundation for executive function capacities begins in early childhood, but self-regulation skills continue to develop well into adolescence and adulthood (Center on the Developing Child at Harvard University, 2011). However, researchers have noted that there are specific periods of development that are particularly crucial to the successful learning of self-regulation skills. For instance, the transition to school years, as well as adolescence years, have been identified as important contexts for self-regulation development, due to the impact of the instructional environment on children’s working memory as they begin formal schooling, and the advancement of higher-order, regulation-relevant cognition in adolescence (McClelland et al., 2017). Some researchers have documented sudden bursts of improvement in self-regulatory capacities such as impulse control and cognitive flexibility in children aged 3–5 (Berger et al., 2007), and others record similarly notable increases in the proficiency of such skills between the ages of 15 and 23 (Center on the Developing Child at Harvard, 2016). This pattern of rapid cognitive control advancement during the childhood years followed by prolonged development during adolescence has also been corroborated by brain imaging research (Fjell et al., 2012; Marsh et al., 2009). Overall, the process of self-regulation development in its entirety can be thought of as a gradual transition from external control to internal control or intentional self-regulation (Sroufe, 1997); one that is highly susceptible to contextual influences from infancy and well into adolescence (King et al., 2013; Lengua et al., 2007). This development of self-regulatory processes has been considered to be the crucial link between genetic predisposition, early experiences, and later functioning (Eisenberg et al., 1995, 2001).

Self-Regulation in the Context of Socioeconomic Adversity

Children living in families experiencing socioeconomic adversity are known to show considerable reductions in the developmental task of self-regulation. Specifically, several studies have demonstrated socioeconomic challenges are associated with poorer performance on domains of self-regulation, including working memory, inhibitory control, effortful control, and attention shifting (Blair et al., 2011; Lengua, 2006; Noble et al., 2007; Sarsour et al., 2011). Socioeconomic risks that have been associated with impacted development of self-regulation in childhood include household income (Hackman et al., 2015), maternal education and occupation (Lipina et al., 2013), disorganization in the home (Berry et al., 2016), and other contextual co-occurring risks, such as neighborhood disadvantage and negative life events (King et al., 2013). Longitudinally, exposure to chronic poverty in childhood has been associated with poorer self-regulatory functioning in early childhood (Finch & Obradović, 2017; Raver et al., 2013), a finding that remains stable for later childhood self-regulation as well (Lawson et al., 2018; Lipina & Evers, 2017). Given the reliance of self-regulatory abilities on prefrontal cortex functioning (Spessot et al., 2004), it is logical that self-regulation may be particularly susceptible to the neurocognitive effects of chronic stress caused by prolonged exposure to adversity (Lackner et al., 2018; Ursache & Noble, 2016). In addition to the neurobiological implications of SES on regulatory behaviors, researchers have also found that the family instability (Sturge-Apple et al., 2017) and transitions to high-poverty neighborhoods (Roy et al., 2014) commonly experienced in low-SES and mother-headed families have notable negative implications for self-regulation in childhood.

Complementing the broader literature regarding exposure to poverty and child outcomes, self-regulation researchers also document clear links between *cumulative*, *early*, and *chronic* exposure to socioeconomic risks and poorer self-regulation in later childhood (Doan et al., 2012; Evans & English, 2002; Raver et al., 2013). Taken together, these findings strongly suggest that children who live in low-income families, particularly those characterized by high levels of instability and disorganization in the home, are likely to show reductions in self-regulatory abilities.

Self-Regulation and Later Adjustment

Self-regulation is considered to be fundamental to adaptive functioning throughout childhood (McClelland et al., 2018). In a seminal study assessing the links between self-regulation

and youth adjustment, Eisenberg and colleagues (2001) recorded important regulation-related differences in children exhibiting externalizing and internalizing concerns from those children who showed no problematic behavior. Specifically, children who rated high in internalizing behavior problems appeared to be over-controlled, with a lack of spontaneity and flexibility seen in children with healthy adjustment, whereas children who exhibited externalizing problems tended to be under-controlled. Subsequent research has continued to confirm patterns of differential self-regulation and -control abilities among children with adjustment concerns (Buckner et al., 2009; Doan et al., 2012; Farley & Kim-Spoon, 2017). Specifically, self-regulatory behaviors in youth have been positively associated with positive outcomes including social competence, confidence, connection, caring and contribution to society in adolescence (Bowers et al., 2011; Gestsdóttir & Lerner, 2008; Mueller et al., 2011), and negatively related to indicators of maladjustment in youth, such as conduct problems, depression and anxiety, and substance use behaviors (Crespo et al., 2019; Piehler et al., 2012; Raver et al., 2017). A recent meta-analysis assessing the associations of self-regulation in childhood to later outcomes revealed that higher self-regulation during early school years is linked to better performance in mathematics and literacy and lower levels of depressive symptoms, aggressive behavior, obesity, cigarette smoking and illicit drug use in the later school years (Robson et al., 2020).

Given these well-established links between socioeconomic adversity and self-regulation, and self-regulation and adolescent adjustment outcomes, it is highly likely that self-regulation might play a crucial mediating role in the association between early socioeconomic adversity and later adolescent adjustment. In fact, there is increasing evidence that one of the primary pathways through which poverty-related adversity might exert its negative influence on youth is through neurocognitive mechanisms (see Blair & Raver, 2012b, 2016). This suggests that the effects of chronic early life adversity on self-regulation potentially sets children on developmental trajectories toward non-optimal outcomes. However, research has also shown that children's regulatory abilities are relatively malleable to environmental changes, implying that contextual influences have the potential to reverse poverty's negative influences on self-regulation (Blair & Raver, 2012b; Raver, 2012). Therefore, assessing self-regulation as a potential mediator in the pathway to adolescent adjustment is important in that it pinpoints a potential target mechanism for prevention and intervention efforts focusing on youth in the context of socioeconomic risk.

Gaps in the Literature

The current dissertation is built on two key foundational findings that have been extensively and consistently corroborated in the literature: i.e., that competent and effective parenting has long-lasting beneficial and protective effects on youth development and wellbeing, and that socioeconomic adversity places quality parenting, and consequently youth, at considerable risk (Conger et al., 2010; Luthar et al., 2000; Masten, 2015). Given this, researchers focused on interventions for at-risk families have asserted the importance of a two-generation approach that strengthens the resources and capabilities of parents in order to foster children's optimal development (Chase-Lansdale & Brooks-Gunn, 2014; Masten & Monn, 2015; Shonkoff & Fisher, 2013; Teti et al., 2017). Research that assesses buffering mechanisms that disrupt family stress processes and identifies points that can be leveraged in order to set off positive "spillover effects" or cascades for parents and youth in the context of adversity is crucial (Doty et al., 2017). Although more attention has been given to resilience-based research of late, the literature examining families formed as a result of a non-marital birth in the context of socioeconomic adversity remains quite risk and deficit-focused. This dissertation therefore addresses some important gaps in the existing literature and is consistent with several recommendations for future directions outlined by researchers.

First, although there has been research assessing the effects of positive parenting in the context of the FSM (e.g., Jeon & Neppl, 2019; Neppl et al., 2015; Taylor et al., 2012, 2010), parental resilience remains a neglected construct in resilience research (Gavidia-Payne et al., 2015; Masten, 2018). Specifically, Gavidia-Payne and colleagues (2015) assert that much of the parenting research in the context of economic adversities has concentrated on ineffective or poor parenting, with parenting constructs commonly assessed as independent or mediating variables rather than outcome variables deserving of explanation. Given the profound impact that competent parenting has on child development, factors that facilitate the capacity of primary caregivers to engage in effective and quality parenting despite the presence of risk factors is especially necessary given that adversities are known to compromise such parenting behaviors. The first paper addresses this key gap and recommendation in the resilience research by assessing social capital as a potential buffering mechanism contributing to parental resilience and ultimately fostering positive parenting in the context of socioeconomic adversity.

Second, extant literature has documented crucial differences across race-ethnic groups with regard to factors that contribute to socioeconomic hardships and stress (Farmer & Ferraro, 2005; Slopen et al., 2016), risk and resilience processes in single-mother families (Taylor & Conger, 2014), family stress processes as posited by the FSM (Conger & Conger, 2002; Nomaguchi & House, 2013; Parke et al., 2004), and the severity of impacts of such adversity on youth outcomes (Brody et al., 2013). Despite this, much of the research assessing socioeconomic adversity treats experiences of economic hardship as remaining constant across families from diverse race-ethnic backgrounds. This dissertation takes a race-ethnically nuanced approach to understanding the impacts of socioeconomic adversity on parents and youth by building a composite measure of socioeconomic adversity and testing it separately for Black, Hispanic, and White families in Paper 1 in order to understand which factors contribute the most to such adversity for each racial/ethnic group. Additionally, Paper 2 includes sub-group analyses aimed at testing differences in resilience processes across race-ethnicities.

Finally, this dissertation addresses calls in the developmental systems and developmental resilience literature for research that integrates multiple systems of analysis in assessing pathways to youth wellbeing in the context of socioeconomic adversity (Lerner, 2012; Masten & Barnes, 2018; Panter-Brick & Leckman, 2013). Together the two papers in this dissertation consider protective factors at individual, family, as well as community levels that may reflect crucial resilience turning points. Specifically, Masten (2018) has called for resilience research that aims to understand processes that connect family-level and individual-level functioning, and Doty and colleagues (2017) stress the importance of community-level support in promoting cascading resilience through better parent functioning. Responding to these calls and theoretically grounded in the developmental systems perspective, the current dissertation incorporates child characteristics, parenting, as well as social capital in the broader effort to understand multi-system resilience processes facilitating positive youth development.

Current Dissertation

The overarching goal of this dissertation is to deepen our understanding of the potential protective mechanisms that disrupt negative trajectories across two generations in the context of socioeconomic adversity. That is, informed by the FSM and with the guiding principles of the developmental systems and resilience theories, I conducted two studies that leverage the FFCWS

dataset to broadly understand: 1) whether social capital enables parents to parent positively in the context of socioeconomic stress, and 2) a) the longitudinal impact of socioeconomic adversity on adolescent adjustment outcomes (i.e., substance use and wellbeing) through the mediating mechanism of self-regulation, and b) whether positive parenting plays a buffering role by moderating the pathways from socioeconomic adversity to adolescent adjustment.

Paper Aims and Hypotheses

Paper 1. Parental Resilience in the Context of Socioeconomic Adversity: The Protective Role of Social Capital. This paper examines whether mothers' social capital and resources buffer the longitudinal effects of socioeconomic adversity on positive parenting behaviors across time. Specifically, in Paper 1 I created a comprehensive, race-ethnic-specific index of socioeconomic adversity, and tested whether mothers' social capital and resources (when children were 3 and 5) moderated the association between socioeconomic adversity across early childhood (ages 0 to 5) and positive parenting when children were 9. Given racial differences in experiences of socioeconomic adversity and levels of social capital (Farmer & Ferraro, 2005; Ma & Klein, 2018; Slopen et al., 2016) the study examined these processes separately within each of the major race-ethnic groups in the FFCWS. My hypotheses were that high levels of social capital and resources would attenuate the association between socioeconomic adversity and positive parenting behaviors (H1). Additionally, I expected these associations to be unique within each race-ethnic sample.

Paper 2. Adolescent Adjustment in the Context of Socioeconomic Adversity: The Protective Role of Positive Parenting. This paper examines: a) the pathways from socioeconomic adversity to adolescent maladjustment (i.e., substance use at Year 15) as well as adolescent flourishing (i.e., wellbeing at Year 15) through the mediating mechanism of self-regulation at Year 9; and b) the moderating role of positive parenting in the pathways from socioeconomic adversity to adolescent adjustment. Specifically, I tested whether socioeconomic adversity was associated with adolescent substance use or wellbeing through its effects on self-regulation in middle childhood, and whether positive parenting moderated these pathways. My hypotheses were that socioeconomic adversity would be indirectly associated with increased adolescent substance use and decreased adolescent wellbeing through self-regulation (H2a), but that these effects would be attenuated for youth who experience higher levels of positive parenting (H2b).

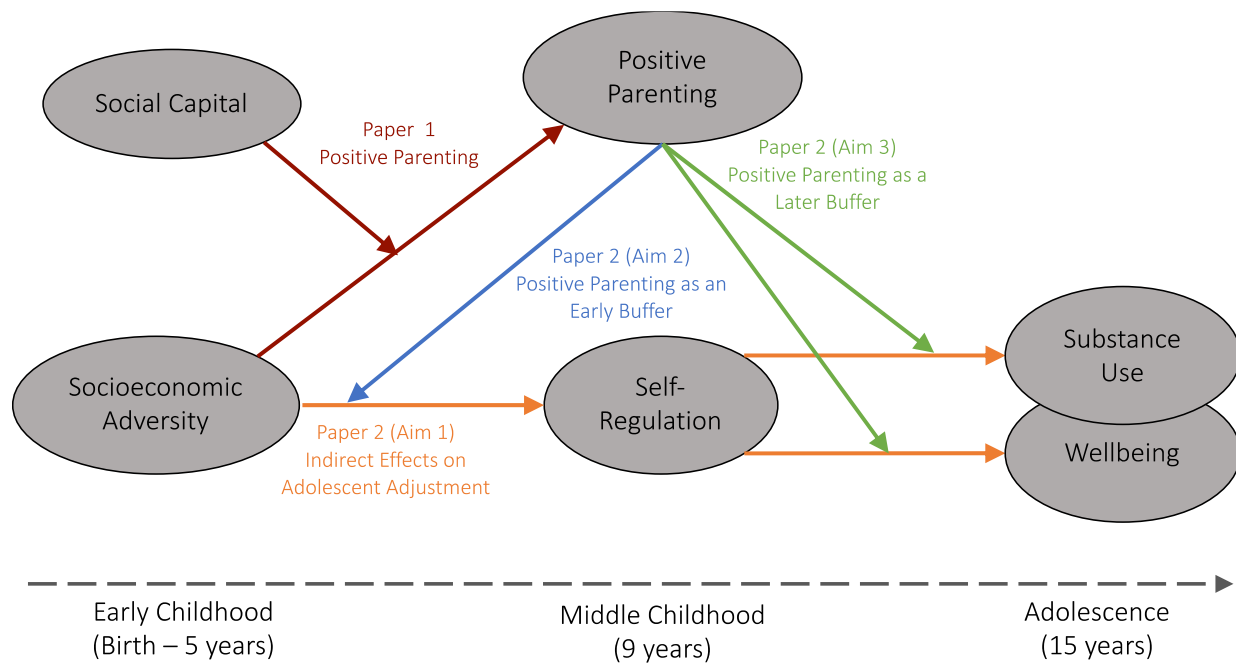


Figure 1. Overall Conceptual Model for Both Proposed Papers

Orientation to the Fragile Families and Child Wellbeing Dataset

The Fragile Families and Child Wellbeing Study (FFCWS) began in 1998 as a collaboration between Princeton University’s Center for Research on Child Wellbeing and the Columbia Population Research Center, with the overarching aim of addressing unanswered questions regarding the wellbeing of unmarried parents and their children in the U.S. (McLanahan, 2009). The study was initially designed to gain a more in-depth understanding of the capabilities of unmarried parents when their child is born (particularly fathers), the nature of relationships in ‘fragile families’ at birth and how they change across time, and how parents and children fare in fragile families. Specifically, researchers at the helm of FFCWS were ultimately hoping to resolve long-standing debates regarding the extent to which non-marital childbearing is caused by poverty and low education; how parental commitments, values, and relationships differ from married to unmarried parents; and whether a non-marital birth leads to differences in parental resources and ultimately poorer child outcomes (McLanahan, 2009). The resulting FFCWS data, which were collected from approximately five thousand families sampled from 75 hospitals in 20 cities across

the U.S. and then weighted, is representative of births in U.S. cities with populations of 200,000 or more people (Reichman et al., 2001).

The full FFCWS dataset includes six waves of data collected from 4,898 families at the child's birth, and subsequently at ages 1, 3, 5, 9, and 15. The core study consists of questionnaires administered to the mothers, fathers, and/or primary caregivers. At Years 9 and 15, questionnaires were also administered to the children. The parent surveys included questions regarding demographic characteristics, economic and employment status, physical and mental health, parenting behaviors, and neighborhood characteristics. Similarly, the child surveys included questions regarding physical and mental health, relationships, socioemotional behavior, health behaviors, wellbeing, etc. Additionally, the project also included in-home assessments of children and their home environments at Years 3, 5, 9, and 15, consisting of information on children's cognitive and emotional development, health, and home environment.

The FFCWS dataset is especially appropriate for testing developmental trajectories across time, and for understanding environmental influences on child and family wellbeing at multiple levels of ecological organization. Additionally, it is well-structured for studies that make use of longitudinal data analysis, as it includes multiple different measures of socioeconomic adversity, parenting, and youth outcomes across time. This allows modeling such as latent variable analysis to incorporate multiple measures into one construct; confirmatory factor analysis to build appropriate composite measures of constructs; and structural equation modeling to test associations among constructs of interest across time.

CHAPTER 2. PARENTAL RESILIENCE IN THE CONTEXT OF SOCIOECONOMIC ADVERSITY: THE PROTECTIVE ROLE OF SOCIAL CAPITAL (PAPER 1)

Parental resilience, or the ability of parents to engage in competent, effective, and warm parenting practices despite exposure to adversity, is a notably understudied construct (Gavidia-Payne et al., 2015; Masten & Barnes, 2018). Considering the substantial body of extant research which suggests that competent, effective parenting suffers in the context of severe socioeconomic adversity (Conger et al., 2010, 2012; Conger & Conger, 2002, 2008), and that such parenting is integral to the optimal development of children and adolescents (Luthar & Eisenberg, 2017; Masten & Barnes, 2018), it is crucial for researchers to focus their efforts on assessing potential protective factors that buffer parents from the negative impacts of such adversity. Social capital, conceptualized as individuals' perceptions of interpersonal trust, exchanges of support, as well as social participation and forms of informal social control (Eriksson, 2011; Kawachi, 2010), is one such construct that has been found to be an asset in the context of parenting at risk. Specifically, existing literature points to the notable protective and promotive effects of social support and neighborhood capital on parenting in the context of socioeconomic risk (Ceballo & McLoyd, 2002; Choi et al., 2018). Importantly, social capital has been found to be a particularly salient resilience resource for families headed by single or cohabiting mothers (Carpiano & Kimbro, 2012; Taylor & Conger, 2017). Despite these promising findings, there are limited studies examining whether social capital buffers mothers from the detrimental impacts of cumulative socioeconomic adversity. Therefore, the present study examines social capital (operationalized in this paper as social support and participation, as well as perceived neighborhood cohesion and control) as one important protective factor for mothers who experience socioeconomic adversity using data from the Fragile Families and Child Wellbeing Study (FFCWS; Reichman et al., 2001).

Socioeconomic Adversity in Single- and Cohabiting-Mother Families

Adversity experienced as a result of socioeconomic vulnerabilities is likely to be exacerbated for unmarried mothers (which may include non-cohabiting or single mothers, as well as cohabiting couples). Extensive research from the FFCWS has documented that single mothers and non-married cohabiting couples with children are disproportionately more likely to experience

economic disadvantages (McLanahan, 2009). For instance, the annual household income of single mothers (as well as cohabiting mothers) in the FFCWS is notably lower than that of married mothers' annual household incomes (Kalil & Ryan, 2010). Additionally, a number of mother-headed families experience material hardships including concerns regarding the ability to pay bills and afford essential utilities and services, and in extreme cases, utility shut-offs, eviction, food insecurity, or insufficient medical care (Teitler et al., 2004). Importantly, Teitler and colleagues documented that more than half of the mother-headed families in their sample reported experiencing at least one such type of hardship. Families headed by single or cohabiting mothers also tend to have fewer sources of economic support at their disposal and experience an increased likelihood of father absence and family instability (Kalil & Ryan, 2010). Compounding this, single and cohabiting mothers are also less likely to have assets, such as owned property, that may help cushion the hardships they face (Barr & Blank, 2009). Therefore, research that identifies protective factors for parents who are experiencing socioeconomic adversity is particularly crucial in the context of cohabiting and single-mother families.

Differences in Experiences of Socioeconomic Adversity by Race-Ethnicity

Experiences of socioeconomic adversity, although universally detrimental, differ across race-ethnic populations. Extant literature has revealed important distinctions in the rates, types, and effects of socioeconomic adversity across families from different races and ethnicities. For instance, census data has consistently shown stark differences in rates of absolute poverty among Black, Hispanic, and White households, with recent estimates showing a 20.8% and 17.6% poverty rate for Black and Hispanic Americans compared to 8.1% poverty among non-Hispanic White Americans in 2018 (U.S. Census Bureau 2019). These disparities persist across the SES spectrum, as Black and Hispanic individuals receive less income at the same education levels, have less wealth at equivalent income levels, and lower purchasing power due to the higher costs of goods and services in the residential areas in which they are disproportionately located (Williams et al., 2010; Williams, Priest, & Anderson, 2016).

Particularly pertinent is the consistent finding that Black children are more likely to experience persistent poverty than children from other race-ethnic groups (Raver et al., 2016; Chaudry & Wimer, 2016; Ratcliffe & McKernan, 2012). This disparity is heightened by reports that Black and Hispanic children of U.S.-born parents are exposed to a greater number of adverse

experiences relative to White children (Slopen et al., 2016). Specifically, Black families are more likely than White families to report experiencing specific material hardships such as being unable to pay full rent and having utilities shut off, even after controlling for demographic, SES, and health status factors that should have accounted for the differences (Rodems & Shaefer, 2020; Bauman, 1998). In addition to being disproportionately more likely to experience persistent poverty, one study found that a higher percentage of Black compared to Hispanic and White families were likely to be residing in a single-parent household, and a higher percentage of Hispanic compared to Black and White families were likely to be residing in a crowded household (Roy & Raver, 2014). However, although Black and Hispanic children have higher rates of exposure to poverty and co-occurring risks, Foster & Kalil (2007) demonstrated that Black and Hispanic single-mother household structures had fewer negative child outcomes compared to their non-Hispanic White counterparts. Therefore, given this heterogeneity in profiles of socioeconomic risk across families of different race-ethnic groups, the current paper aims to build a measure of socioeconomic adversity that is equally valid within the three major race-ethnic groups in the U.S. Importantly, the aim of this paper is to describe the impacts of socioeconomic adversity *within* each race-ethnic group using a measure built specifically for each group.

Measuring Socioeconomic Adversity

Given the complexity of socioeconomic adversity as a construct, researchers have struggled to reach consensus on the best way to measure it. Much of the dominant poverty literature relies on measures of absolute poverty (i.e., having a household income that falls below an established cutoff at a given point of time) in assessing impacts on child development (Yoshikawa et al., 2012). However, for some time now, researchers have been documenting the limitations of a measure that solely focuses on income to fully capture experiences of socioeconomic adversity. For instance, the Family Stress Model (FSM) accounts for measures of material hardship in assessments of socioeconomic adversity in order to more thoroughly assess families' experiences and perceptions of economic pressure and subsequent stress (Conger & Conger, 2008; Conger et al., 2010; Shelleby 2018). Specifically, hardship measures that account for food insecurity, residential instability, inadequacy of healthcare, and the inability to pay for essential goods and services have been found to be particularly important (Gershoff et al., 2007). Researchers have also found that in addition to income, factors that contribute to families' socioeconomic adversity

include marital status, household structure, maternal education, and access to health insurance (Anand et al., 2019). Therefore, it is crucial when assessing socioeconomic adversity to take into account the *cumulative* effects of exposure to multiple socioeconomic risks.

The *timing* as well as *chronicity* of exposure to these risks is also considered to be particularly implicative in the context of family stress processes. Specifically, a family's economic condition in early childhood is likely to matter more for family stress processes than their economic condition during adolescence (Brooks-Gunn & Duncan, 1997; Chaudry & Wimer, 2016), since children below five years of age are especially sensitive to the lifelong effects of early adversity (Shonkoff et al., 2012). Similarly, chronic poverty during childhood, or poverty experienced over longer periods of time, has consistently been found to be a robust predictor of negative youth and family outcomes (Ratcliffe & McKernan, 2010, 2012; Wagmiller et al., 2006). Taking these findings into account, the current paper aims to tap into three aspects of socioeconomic adversity: *cumulative* risks, the *timing* of adversity, as well as the *chronicity* of exposure, and its effects on parenting outcomes.

Parenting in the Context of Socioeconomic Adversity

The difficulties of parenting in the context of socioeconomic adversity are well explored within the FSM, which asserts that the economic pressures felt by parents exposed to socioeconomic adversities lead to parental distress and inter-parental conflict, which in turn disrupts parenting practices, ultimately leading to poorer developmental outcomes in children and youth (Conger et al., 2010; Conger & Donnellan, 2007; Masarik & Conger, 2017; McLoyd et al., 2014). Recent studies have validated that the parental distress and interparental relationship problems resulting from economic hardship uniquely contribute to poorer parenting quality and harsher parenting practices in early childhood, middle childhood, and adolescence (Landers-Potts et al., 2015; Neppl et al., 2016; Nievar et al., 2014; Ponnet, 2014), including longitudinally within the FFCWS sample (Gard et al., 2019). These findings have been corroborated in Black (Iruka et al., 2012; L. G. Simons et al., 2016; L. G. Simons & Steele, 2020; Taylor et al., 2010), Hispanic (Taylor, Larsen-Rife, et al., 2012; White et al., 2015), and Asian American (Hou et al., 2016) families in the U.S., as well as in international populations (Emmen et al., 2013; Krishnakumar et al., 2014), suggesting that the processes linking socioeconomic adversity and parenting occur similarly across diverse family contexts. This overwhelming evidence in support of the FSM

pathways linking socioeconomic adversity and parenting outcomes establishes that competent parenting in this context is highly likely to be at heightened risk.

The negative impacts of socioeconomic adversity on parenting are exacerbated in families headed by single or cohabiting mothers. That is, the high levels of economic stress that single mothers face are further compounded by everyday hassles, social isolation, as well as the emotional strains resulting from the demands of raising a child without the support of a co-parent (Murry et al., 2001, Taylor & Conger, 2017). Researchers have demonstrated that the role strain resulting from the dual demands of being a primary wage-earner as well as primary caregiver has a notable impact on stress processes across samples of ethnically diverse single-mother families (Mistry et al., 2002; Taylor et al., 2010; Taylor, Widaman, et al., 2012). Specifically, competing demands arising from work and childcare responsibilities have been shown to increase work-family conflict, negatively impact family routines, and increase maternal internalizing concerns (McLoyd et al., 2008), which is in turn linked to lower levels of maternal warmth and effective child management practices over time (Taylor et al., 2010). Researchers have also found that frequent family transitions and relationship churning (i.e., breaking up and getting back together with the same partner), which tend to be more common in cohabiting relationships (S. L. Brown et al., 2016; Vennum et al., 2014), has been linked to higher levels of maternal stress and harsh parenting (Beck et al., 2010; Halpern-Meehin & Turney, 2016; McLanahan, 2011). Taken together, these findings suggest that socioeconomic stressors result in particularly high levels of emotional distress for single and cohabiting mothers, which then, consistent with the FSM, leads to disruptions in effective parenting.

Despite the work catalogued in this section demonstrating higher likelihoods of poor parenting in the context of economic hardship, there is also evidence within the FSM literature indicating that parents are able to engage in positive parenting practices (i.e., those characterized by high levels of warmth, responsiveness, acceptance, and support and low levels of harshness; Maccoby & Martin, 1983; Baumrind et al., 2010) even in the context of socioeconomic adversity. Specifically, positive parenting has been linked to a host of adaptive child outcomes in White (Jeon & Neppl, 2016; Kwon & Wickrama, 2014; T. K. Lee et al., 2013; Neppl et al., 2015) as well as Black (Taylor et al., 2010) and Hispanic families (Taylor et al., 2012) facing socioeconomic risks. Therefore, considering the importance of positive parenting in families experiencing

socioeconomic adversity, it becomes especially imperative to research resilience factors that can foster such parenting practices within this high-risk context.

Social Capital as a Protective Factor

There is considerable evidence indicating that social and neighborhood support, participation, and cohesion may act as buffers against adverse outcomes related to socioeconomic adversity in low-income communities, particularly for low-income single and cohabiting mothers (Dauner et al., 2015; Domínguez & Watkins, 2003; Kalil & Ryan, 2010; Manuel et al., 2012). For the purpose of the present study, dimensions of social support and neighborhood cohesion together are operationalized as social capital. Specifically, social capital can be conceptualized as individuals' perceptions of interpersonal trust, exchanges of support, as well as social participation and forms of informal social control (Eriksson, 2011; Kawachi, 2010).

Perceived social support has been found to buffer the impacts of stress associated with financial hardship and foster positive parenting behaviors in the context of socioeconomic adversity (McConnell et al., 2011). Using national survey data, researchers have documented that social support enhances parental wellbeing and buffers the effects of maternal depression on child behavior problems (L. C. Lee et al., 2006). With regard to single mothers in particular, those who perceive support from family members report improved psychological adjustment, increased self-efficacy, and higher quality parenting (Murry et al., 2001). Similarly, research examining the buffering effects of social support for mothers experiencing material hardship found that higher levels of social support was negatively associated with parental stress (S. Zhang et al., 2015). In addition to family, support from friends is also associated positively with mothers' life satisfaction and fulfillment, and negatively with stress, emptiness, depression, anxiety, and loneliness (Luthar & Ciciolla, 2015). Interestingly, perceived emotional support appears to be a particularly strong buffer for low-income mothers relative to tangible instrumental support (Manuel et al., 2012; Taylor & Conger, 2017).

Research investigating the role of neighborhood social capital on parental wellbeing suggests that women caregivers are particularly likely to rely on neighbor networks in efforts to tackle daily tasks and achieve optimal outcomes for themselves, their children, and other family members (Domínguez & Watkins, 2003). For instance, researchers have found that low social capital within parents' social networks is associated with higher levels of parental distress and

decreased parental support, monitoring, and discipline (Dorsey & Forehand, 2003; R. L. Simons et al., 1993). Relatedly, parents' perceptions of low social capital are associated indirectly with increased levels of child behavior problems through the mediating role of decreased parental support and solicitation (Vieno et al., 2010). Perceptions of *positive* neighborhood characteristics, on the other hand, have been linked to positive parenting outcomes in the context of adversity. For instance, higher levels of social cohesion and control have been linked to greater social support, which was in turn linked to more effective parenting (Byrnes & Miller, 2012; Maguire-Jack & Wang, 2016), and mothers with more favorable perceptions of neighborhood support and safety were more likely to engage in more interactive parenting behaviors (Kenney, 2012). Similarly, in a study evaluating the role of neighborhood contexts within an FSM framework, social cohesion and control were both found to be positively associated with children's cognitive development through lessened parental stress (Choi et al., 2018). Researchers have also found that neighborhood collective efficacy may be particularly protective in the context of family stress processes for Hispanic low-income families (Ma & Klein, 2018), which could be due to ethnic minority mothers' increased risk for social isolation, acculturation stress, language hassles, etc. Researchers have similarly found that extended kin support networks play an important buffering role for Hispanic and Black single-mother families facing socioeconomic stressors (McLoyd, 1990; Prelow et al., 2010; Taylor & Conger, 2014; G. Wallace, 2013).

Given these promising findings regarding the buffering effects social capital has in the context of family stress processes, it may be an important factor that contributes to parental resilience in the context of families (particularly those headed by single mothers) experiencing socioeconomic adversity.

The Present Study

Although past literature has more than adequately examined the impacts of socioeconomic adversity on parenting, there remain some important gaps in our knowledge. First, the literature remains largely deficit-focused despite evidence documenting the ability of parents to engage in positive parenting behaviors when experiencing socioeconomic adversity. Importantly, although researchers have demonstrated that positive parenting buffers youth from the effects of socioeconomic adversity, little research has focused on the factors contributing to *parental resilience* as operationalized by Gavidia-Payne and colleagues (2015) in this context (see Ellingsen

et al., 2014 for an exception). It is crucial to identify the factors that allow potentially vulnerable parents to engage in positive parenting despite socioeconomic adversity, so that youth wellbeing can in turn be fostered. Second, although an increasing amount of research measures socioeconomic adversity more holistically, a considerable amount of existing literature continues to rely on single indicators to capture the experiences of economic hardships that families in poverty face. Third, although various forms of social support and neighborhood characteristics have been independently assessed as parenting assets, no known study to date has assessed mothers' social capital holistically, testing dimensions of both social support as well as neighborhood factors, as a buffering mechanism in the association between socioeconomic adversity and positive parenting, particularly over time. Finally, this study takes advantage of the ethnically diverse nature of the FFCWS sample to explore variations in experiences of socioeconomic adversity across non-Hispanic Black, Hispanic, and non-Hispanic White families, and test differences in the buffering effects of social capital across these groups. Given established race-ethnic differences in both experiences of socioeconomic adversity as well as levels of social capital (Farmer & Ferraro, 2005; Ma & Klein, 2018; Slopen et al., 2016), it is important for research to examine potential differences in protective factors across race-ethnic groups in order to better inform prevention and intervention efforts targeting parenting in vulnerable families.

To address these gaps in the literature, this study had three main aims. The first aim was to create a holistic measure of socioeconomic adversity which: a) is valid within each of the major race-ethnic groups present in the FFCWS, and b) can be used to create three separate variables assessing cumulative socioeconomic adversity, chronicity of socioeconomic adversity (chronic vs. transient), and timing of socioeconomic adversity (early vs. late within the birth to 5-year period).

The second aim was to test the longitudinal impacts of cumulative, chronic, and early socioeconomic adversity experienced during the first five years of the child's life, on mothers' positive parenting practices when the child was nine; separately within each race-ethnic group. We expected that: (1) cumulative socioeconomic adversity during the birth to 5-year period would be negatively associated with mothers' positive parenting when the child is nine across all race-ethnic groups. (2) Chronic socioeconomic adversity would be more strongly negatively associated with positive parenting across time compared to transient socioeconomic adversity for all race-ethnic groups, but that chronic socioeconomic adversity would account for greater variance in positive parenting for non-Hispanic Black and Hispanic families compared to non-Hispanic White families.

(3) Early socioeconomic adversity would negatively predict positive parenting across time compared to late socioeconomic adversity across all race-ethnic groups.

Aim 3 was to test whether mothers' social capital when the child was 3–5 years moderated the association between socioeconomic adversity (including cumulative, chronic vs. transient, and early vs. late) experienced during early childhood and mothers' positive parenting when the child is nine; separately within each race-ethnic group. Based on prior research indicating that Black and Hispanic mothers with higher levels of perceived social support report less parenting stress (Cardoso et al., 2010; Ceballo & McLoyd, 2002; Ma & Klein, 2018), we hypothesized that mother's social capital would moderate the association between cumulative socioeconomic adversity during the birth to 5-year period and middle childhood positive parenting for non-Hispanic Black and Hispanic families. Specifically, we predicted that the association between cumulative socioeconomic adversity and positive parenting would be weaker for Black and Hispanic mothers with higher levels of social capital. No specific hypotheses were made regarding the other two socioeconomic adversity variables given limited background literature on the differential buffering impacts of social capital in the context of chronic versus transient adversity, or early versus late adversity. These tests were exploratory in nature.

METHOD

Participants and Procedures

Data for this study were drawn from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal study following 4,898 children born in 20 large U.S. cities between 1998 and 2000. The study was designed to oversample mothers with unmarried births, with a smaller sample of married births for comparison. At baseline, interviews were conducted with recent mothers in the maternity wards of 75 hospitals within the 20 U.S. cities included in the study. Mothers were ineligible if they were minors, if they were placing their baby for adoption, or if they reported that the baby's father was deceased. Eligible mothers were asked to identify the father of the child, and fathers were interviewed in person during hospital visits or by telephone. Nearly all the baseline interviews with the mother took place in person, and over three-quarters of the father interviews were in person. All survey materials, including brochures, consent forms,

screening instruments, and questionnaires, were available in both English and Spanish during all waves of data collection.

Currently, FFCWS includes six waves of data collected at the child's birth, and at ages 1, 3, 5, 9, and 15 (hereafter, these timepoints of data collection are referred to as 'Years'). The core study consists of questionnaires administered to the biological mothers and fathers. From Year 3 onwards, an in-home study component was included which included a Primary Caregiver (PCG) interview, interviewer observations and assessments, and activity workbooks. Interviewer observations and assessments were conducted by trained bilingual interviewers. At Years 9 and 15, questionnaires were also administered to the children. The full sample is 52% male, and ethnically diverse (48% Black, 27% Hispanic, 21% White, and 4% Other race-ethnicity).

The present study uses data collected from the biological mother surveys at birth and Years 1, 3, and 5, and from in-home observations at Year 9. Mothers whose race-ethnicity was classified as "other" ($n = 194$), or "missing" ($n = 11$) were excluded from analyses given that multigroup analysis were conducted to understand the impacts of socioeconomic adversity on positive parenting separately for the three major race-ethnic groups represented in the FFCWS. It should be noted that the full sample (excluding 'other' or missing race-ethnicity participants as mentioned) was used to build the socioeconomic adversity measure. However, for hypothesis testing, families who did not participate in the Year 9 in-home surveys *or* in which the primary caregiver was not the biological mothers in the Year 9 in-home assessments were excluded (excluded $n = 1777$), since positive parenting was measured using interviewer observations conducted during the Year 9 in-home survey. Therefore, our total sample size for creating the socioeconomic adversity measure was $N = 4,485$ families (non-Hispanic Black $n = 2,229$; Hispanic $n = 1,267$; non-Hispanic White $n = 989$), while the hypothesis testing analytic sample was $N = 3,006$ (non-Hispanic Black $n = 1,556$; Hispanic $n = 793$; non-Hispanic White $n = 635$).

Overall, 79% of the mothers in the full sample were not married to the father of the focal child at the time of the birth, and 38% were cohabiting with the father at the time of the birth. The mean age of mothers at baseline was 25.28 ($SD = 6.04$), and 55% of the focal children in the sample were male. At baseline, 40% of mothers had not completed high school, and the average family income was \$31,994. See Table 3 for descriptive statistics on our analytic sample specifically, broken down by race-ethnicity.

Measures

Socioeconomic Adversity

A comprehensive index of socioeconomic adversity was created (see Analytic Strategy) using a mix of self-reported and constructed measures of household income, maternal education, marital status, material hardship, and healthcare insurance, reported at Years 1, 3, and 5. Using this index, three variables were constructed to capture i) cumulative socioeconomic adversity experienced during the early childhood period, ii) chronicity, and iii) timing of exposure to socioeconomic adversity. The measure for each indicator is described here (as well as in Appendix A, Table A.1.), and the construction of the socioeconomic adversity variables are detailed in the analytic strategy section. Measures were constructed such that higher values were indicative of greater socioeconomic risk. See Appendix A, Tables A. 2. (a) and (b) for descriptive data on all the socioeconomic adversity measures within each race-ethnic sample.

Household Income. Household income was measured by maternal self-report at Year 1, 3, and 5 surveys. To correct for skewness in the raw household income variables, we created a categorical variable of household income brackets based on US Census data. See Table A.1. for a full list of the income categories, which range from ‘\$200,000 and over’ to ‘under \$5,000’ in decreasing order. The variable was treated as continuous for the purposes of our analyses.

Maternal Education. Mother’s education was measured by maternal self-report at the Year 1, 3, and 5 surveys. The ordered categories of education included: less than high school, high-school or equivalent, some college or technical school, and college or graduate school. These categories were reverse-coded for analyses such that less than high-school education was the highest score (to reflect higher adversity), and college/graduate school was the lowest score.

Marital Status. Mothers’ self-report of their marital status was assessed at Years 1, 3, and 5. A categorical variable was constructed that assessed whether the mother was: 1) married to the child’s father, 2) cohabiting with the child’s father, 3) married to a partner other than the father, and 4) cohabiting with a partner other than the father (all response options were “Yes”/ “No”) to create a single dichotomous variable assessing marital status as married (= 0) vs. single/cohabiting (= 1) at each time point. Based on literature indicating that cohabiting-mother families often share similar socioeconomic risk profiles to single-mother families (e.g., Livingston, 2018; Manning, 2015; Percheski, 2018), and that children of single or cohabiting mothers differ more from children

of married mothers than from each other particularly with regard to socioemotional outcomes (S. L. Brown, 2004), cohabiting and single mothers were collapsed into one group within each race-ethnic sample for this paper.

Material Hardship. Material hardship was measured at Years 1, 3, and 5 using six questions assessing participants' economic hardship. Mothers responded using "yes/no" to whether hardships such as not being able to pay bills on time, loss of utilities, and going hungry, had occurred within the past 12 months (e.g., "Was there any time in the past 12 months when (you/your household) did not pay the full amount of the rent or mortgage?") The variable was dichotomized to indicate the presence of *any* material hardships (0 = none, 1 = one or more hardships) given problems with skew, following prior studies using FFCWS data (Zilanawala & Pilkauskas, 2012).

Healthcare Insurance. Healthcare access and insurance was measured at Years 1, 3, and 5 using mothers' yes/no responses to the questions "Are you or your child(ren) (who live with you) currently covered by Medicaid (CA: Medi-Cal) or by another public, federal or state assistance program which pays for medical care or do you belong to a Medicaid HMO?" and "Are you or your child(ren) currently covered by a private health insurance plan?". A single dichotomous variable assessing access to healthcare insurance was created (0 = private healthcare insurance, 1 = publicly funded or no healthcare insurance) following Anand and colleagues' (2019) finding that publicly funded or no healthcare insurance is an indicator of greater socioeconomic risk.

Positive Parenting

Positive parenting was measured using 11 interviewer-reported items from the 55-item version of the Home Observation for the Measurement of the Environment (HOME) inventory (Caldwell & Bradley, 2003) which assess aspects of the environment in which a child is reared. The HOME inventory is completed by trained observers during home visits, using "yes/no" response options to a series of questions. At Year 9, questions assessing parental warmth and responsiveness included items such as: "Parent helped child demonstrate achievement or skill during visit", and "Parent caressed, kissed, or cuddled child once during visit". Items assessing harsh parenting included: "Parent shouted at child during visit" and "Parent scolded, derogated, or criticized child more than one during visit". Items were summed (with harsh parenting items

reverse-coded) to create a composite of positive parenting at 9 Years, and final scores for each timepoint ranged from 0 to 11, with Cronbach's $\alpha = 0.70$. See Table 3 for descriptive data.

Social Capital

Mothers' social capital when children were 3 and 5 years of age were measured using four indices informed by the 2006 Social Capital Community Survey: *social support and trust*, *social participation*, *perceived neighborhood social cohesion*, and *perceived neighborhood social control* (See Dauner et al., 2018 for a recent study using these indices to measure social capital in the FFCWS sample). Scores for each measure were aggregated by averaging across Years 3 and 5 to create a composite measure of mothers' social capital during this period. See Table 3 for descriptive data on all the social capital measures.

Social Support/Trust. Mothers reported on six questions assessing (0 = no, 1 = yes) whether they had people in their life who would provide emotional as well as tangible support if and when they needed it (e.g., "Do you have someone you could trust to look after your child if you were away?", "Do you have someone who could loan you \$200?"). Total scores ranged from 0 to 5 for each timepoint, and summed scores at each of the two time points were averaged to assess social support/trust across the child's 3–5 age range.

Social Participation. Mothers reported on items assessing their participation in various community activities including their child's school, community groups, and religious services in the past 12 months prior to the survey. In Year 3, four separate items assessed mothers' participation in different social activities (church-affiliated groups, service clubs, community organization, and group working with children), with dichotomous response options (1 = yes, 0 = no). However, in Year 5, a single item assessed (0 = no, 1 = yes) mothers' participation in *any* social group, including senior center, social or work group, church-related group, charity, public service, or community group. Therefore, for Year 3, a single variable was created using the four items, to assess participation in *any* social activity to match the Year 5 variable. The final aggregated dichotomous variable assessed whether mothers participated in *any* social activity across the child's 3–5 age range (0 = no, 1 = yes).

Perceived Neighborhood Social Cohesion. Mothers reported on neighborhood social cohesion using five items (Sampson et al., 1997) assessing social cohesion of their neighborhood (e.g., "People around here are willing to help their neighbors" and "Gangs are a problem in the

neighborhood.”) Response options ranged from 1 = strongly agree to 4 = strongly disagree, with negative items reversed coded so that higher scores reflected higher levels of social cohesion. Mean scores were computed for each time point (range = 1 to 4), and final scores for the two time points were averaged to assess mothers’ perceived neighborhood cohesion across the child’s 3–5 age range. Cronbach’s α ’s for this scale were 0.71 and 0.75 at Years 3 and 5 respectively.

Perceived Neighborhood Social Control. Perceived neighborhood control included five items assessing collective efficacy (Sampson et al., 1997), and asked mothers to report on a five-point Likert-scale (0 = very likely to 4 = very unlikely) assessing whether neighbors would intervene if children were 1) skipping school, 2) spray painting a building, and 3) showing disrespect to an adult 4) intervening to diffuse a fight, and 5) saving a local firehouse threatened by budget cuts. All items were reverse coded so that higher scores indicated higher levels of perceived neighborhood social control. Mean scores were computed for each time point (range = 0 to 4), and final scores for the two time points were averaged to assess mothers’ perceived neighborhood control across the child’s 3–5 age range. Cronbach’s α ’s for this scale were 0.87 and 0.89 at Years 3 and 5 respectively.

Covariates

Included covariates were based on past literature demonstrating their influence on the socioeconomic outcomes of families (Kalil & Ryan, 2010; Zilanawala & Pilkauskas, 2012). Covariates were measured at baseline unless otherwise noted, and included: the focal child’s sex, mother’s age, the number of mother’s biological children, mother’s age at her first birth, whether mothers were born in the U.S., whether the mother’s baseline interview was conducted in Spanish, and whether the mother met criteria for depression or anxiety (at Year 1) based on the standardized Composite International Diagnostic Interview – Short Form (Kessler et al., 1998). Descriptive statistics on covariates within each race-ethnic sample are included in Table 3.

Analytic Strategy

Constructing the Socioeconomic Adversity Measure

Our first aim was to build a holistic measure of socioeconomic adversity that would be equally valid within non-Hispanic Black, Hispanic, and non-Hispanic White families in the

FFCWS, and that could be used to tap into cumulative socioeconomic adversity, as well as the timing and chronicity of the adversity. To do this, a latent variable measuring socioeconomic adversity was built separately for non-Hispanic Black, Hispanic, and non-Hispanic White families, using indicators assessed when children were 1, 3, and 5 (baseline measures were not used so as to tap into socioeconomic adversity experienced specifically from birth to age five). Three types of socioeconomic adversity variables were created: one continuous variable tapping into *cumulative* adversity across the child's birth to 5-year period, and two binary variables tapping into the *chronicity* (i.e., transient vs. chronic), and *timing* (i.e., early vs. late) of adversity. This section details the measurement construction steps.

Constructing the Baseline Model

To construct a latent socioeconomic adversity variable for non-Hispanic Black, Hispanic, and non-Hispanic White families separately, at each time point (i.e., Years 1, 3, and 5; see Figure A.1. in Appendix A), multi-group Confirmatory Factor Analysis (CFA) was conducted using the household income, maternal education, marital status, material hardship, and healthcare insurance indicators, in Mplus version 8.4 (Muthén & Muthén, 1998-2017). Drawing on tools from the measurement invariance literature (Kline, 2015), increasingly restrictive models were built in steps (described below) in order to assess whether the latent constructs of socioeconomic adversity were constructed similarly across timepoints (step 1), and within each race-ethnic group (step 2). Missing data was accommodated using the mean and variance-adjusted Weighted Least Squares Estimator (WLSMV), since it is considered to be a robust estimator that provides the best option for modeling categorical or ordered data (T. A. Brown, 2015).

Checking Similarity of Constructs across Time. In a multi-group analysis where the grouping variable is the timepoint of assessment (i.e., Year 1, 3, or 5), baseline models were constructed (see Figure A.1.) wherein the factor loadings of each indicator on its factor was constrained to be equal across time-points within each race-ethnic group. It was decided a-priori that this would be the preferred model and would be used if the model fit was sufficient within each race-ethnic group. Model fit was assessed using Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), with $CFI \geq .90$ and $RMSEA$ and $SRMR \leq .08$ following prior recommendations (Jackson et al.,

2009; Kline, 2015). Indicators with loadings lower than 0.4 that could be dropped without a decrement in model fit for any of the groups were excluded from the measure.

Checking Similarity of Constructs Across Race-Ethnic Groups. If the step 1 models showed time-invariance in loadings and the same indicators loaded onto the socioeconomic adversity factor for all race-ethnic groups, then the next step would be to constrain factor loadings across race-ethnic groups. The same model fit criteria as described above, in addition to a chi-square test of comparative model fit would test for a decrement in model fit. A decrement in model fit would indicate that the factor loadings differ across race-ethnic groups, whereas no decrement in model fit would indicate the constrained (and thus more parsimonious) model would be preferred, and the scoring process outlined below would be conducted based on the single, most parsimonious model. However, if a) different indicators loaded on the socioeconomic adversity factor across race-ethnic groups or b) there was a decrement in model fit when constraining indicator loadings across race-ethnic groups, then the processes outlined below would be carried out separately for each race ethnic group to create variables that accurately tapped into socioeconomic adversity within each sample.

Constructing the Final Socioeconomic Adversity Variables

Cumulative Socioeconomic Adversity. Once the models for each timepoint within each race-ethnic group were finalized, factor scores were saved to identify mothers' relative standing on socioeconomic adversity for each timepoint within each race-ethnic group. Then, to tap into *cumulative* socioeconomic adversity across the birth to five-year period, the factor scores were summed across the three time points for each race-ethnic group, after a scalar adjustment to ensure that zero indicates the lowest levels of adversity.

Chronic and Early Socioeconomic Adversity. To assess the chronicity and timing of socioeconomic adversity, we separated each race-ethnic sample into conceptually relevant subsamples based on the distribution of factor scores (i.e., quintiles that are separated into the top 20%, second 20%, and so on). We also identified theoretically relevant thresholds that broadly reflected adversity for each indicator. For instance, based on literature within the FFCWS sample (Kalil & Ryan, 2010), 'single/cohabiting' was considered a reflection of higher adversity for the marital status indicator, and an education level of 'less than high-school' was considered an indication of higher adversity. Lack of healthcare insurance *or* publicly funded healthcare insurance was

considered an indication of higher adversity as per recent findings (Anand et al., 2019). And finally, the presence of *any* material hardship was considered a reflection of higher adversity as per existing literature (Zilanawala & Pilkauskas, 2012). In addition to theoretical thresholds, we also identified empirically relevant thresholds to validate whether they made sense for this sample by a) checking the raw distributions of income in each sample for a natural cut-off point, and b) examining participants' income within each factor sub-sample. Then, using these identified thresholds, we examined the distributions of the indicators for each sub-sample to determine cut-points of factor scores that reflect *higher* vs. *lower* socioeconomic adversity with each family assigned an adversity label of 'higher' or 'lower' at each timepoint based on their factor score quintile and the identified thresholds.

These cut-points were then used to create the nominal chronicity and timing variables. Specifically, families that experienced higher socioeconomic adversity in at least two of three timepoints were classified in the *chronic* as opposed to *transient* or *low* socioeconomic adversity category (see Dickerson & Popli, 2016 for evidence that even one extra year of experiencing poverty has a marked adverse effect on families and children). Families that experienced higher socioeconomic adversity at either Years 1 or 3 (or both) were classified as having experienced *early* socioeconomic adversity as opposed to families who experienced adversity only at Year 5 (*late* socioeconomic adversity).

Hypothesis Testing

Data Preparation

Before beginning formal hypothesis testing, scatterplots were used to confirm that socioeconomic adversity and positive parenting were linearly (as opposed to non-linearly) associated. Additionally, bivariate correlations were analyzed to ensure associations were in the expected directions and to examine associations between the covariates (i.e., child sex, mothers' number of biological children, maternal age at her first birth, immigration status, and whether the mother meets criteria for depression or anxiety) and the key variables of interest (i.e., socioeconomic adversity, positive parenting, and mothers' social capital). Based on correlations, only covariates correlated at $p < .05$ with the key final (aggregated) variables were included in the a priori model to ensure parsimony.

Hypothesis Testing Regression Equations

Our first aim was to test whether early childhood socioeconomic adversity longitudinally impacted mothers' positive parenting behaviors when the child was 9. We expected that adversity experienced during the focal child's birth-to-five period would negatively impact mothers' positive parenting at Year 9 (H1). Our second aim was to test whether four key dimensions of social capital assessed when the child was 3 and 5 would moderate these associations between early childhood socioeconomic adversity and mothers' positive parenting behaviors. We hypothesized that the negative associations between socioeconomic adversity and positive parenting would be weaker for mothers with high levels of social capital (H2).

To test these hypotheses, regression analyses were conducted in Stata 16 (StataCorp, 2019) using the SEM command with the Full Information Maximum Likelihood (FIML) option to accommodate missing data. All continuous predictors were standardized prior to analyses. A series of stepwise regressions were conducted a) for each race-ethnic group, and b) within each race-ethnic group for each of the three socioeconomic adversity variables (cumulative, chronicity, and timing, i.e., a total of nine stepwise regression models). Regression steps included (1) entering the baseline effect of the socioeconomic adversity variable; (2-5), adding the effects of each of the social capital indicators independently; (6), adding all the four social capital variables at the same time; (7), adding covariates and controlling for Year 5 levels of positive parenting; (8-11), adding interactions between the socioeconomic adversity variable and each of the social capital variables one by one, and finally (12) a final model was fit that included all covariates and interactions where $p < .05$ (if any). These models were built in a series of steps to test the robustness of results regarding our main hypotheses. Full results from the stepwise regressions are available upon request; for parsimony, only the final models are presented for each race-ethnic group. In the last step of analyses, we probed significant interactions in Mplus (Muthén & Muthén, 1998-2017) using the Model Constraints command to test the significance of simple slopes to determine the levels of social capital at which the associations between socioeconomic adversity and positive parenting were strongest. The final models were specified as:

Positive Parenting Y9_i

$$\begin{aligned} &= \alpha_0 + \alpha_1 \text{Socioeconomic Adversity (SA)}_i \\ &+ \alpha_{2-5} \text{Social Capital indicators}_i + \alpha_{6-12} \text{Covariates}_i \\ &+ \alpha_9 \text{Positive Parenting Y5}_i + \alpha_{10} \text{SA} * \text{Social Capital}_i + r_i \end{aligned}$$

Power Analysis

A Monte Carlo simulation study in Mplus was used to determine the power to detect hypothesized effects in the FFCWS data. Simulations included approximately 30% missing for social capital and positive parenting variables based on study attrition statistics. Previous literature showed effects of .17 for associations of socioeconomic adversity and positive parenting (Jeon & Neppl, 2016), and .14 to .16 for social capital and positive parenting (Ceballo & McLoyd, 2002). To be conservative, moderate effects were used (.15) of social capital on positive parenting, as well as for the main effects of cumulative socioeconomic adversity, socioeconomic adversity chronicity, and socioeconomic adversity timing on positive parenting, and the interaction of socioeconomic adversity*social capital on positive parenting. The study is well powered to detect a medium size (i.e., .15) main effect of cumulative socioeconomic adversity and its interaction with social capital (power > .98), but underpowered to detect small effects (e.g., .05, power = .28-.30 for direct and interaction effects).

RESULTS

Socioeconomic Adversity Measure Construction

Baseline Model Results

In the baseline model including constrained factor loadings across time within each/race ethnic group proved to have good fit with the data, with CFI and TLI values > .95 and RMSEA and SRMR values < .05. However, different indicators loaded onto the socioeconomic adversity factor for each race-ethnic group (see Figures 2 (a)–(c) for one-factor CFA model results for each race-ethnic group). For White families, all five indicators had factor loadings higher than 0.4. However, for Black families the material hardship indicator was dropped as it had a factor loading less than 0.4, and for Hispanic families both material hardship and marital status indicators were dropped as factor loadings for those two indicators were less than 0.4. Participants with missing data on all the socioeconomic adversity indicators were excluded from the analyses (excluded *ns*: Black *n* = 97; Hispanic *n* = 69; White *n* = 41).

Since the final socioeconomic adversity factors represent different underlying constructs for non-Hispanic Black, Hispanic, and non-Hispanic White families, the second planned step of

comparing the loadings across race-ethnic groups was deemed inappropriate. Because the final models included constrained factor loadings across time within race-ethnic groups, in the next step of the socioeconomic adversity measure construction, the same thresholds and factor score cut points used to create chronicity and timing measures were used across assessments within race-ethnic groups. Results from subsequent analyses are presented and discussed separately for each sample.

It should be noted that we begin by describing results of the measure construction within the non-Hispanic White sample because indicator thresholds within this sample align most closely with the theoretical thresholds identified within existing literature. However, the non-Hispanic White sample is not intended to be the reference group for this measure; instead, we discuss results separately within each sample. We then describe the measurement construction for non-Hispanic Black families followed by Hispanic families, which required additional probes of the indicators to identify thresholds that were more relevant for each of these samples respectively.

Describing the Final Socioeconomic Adversity Variables

Non-Hispanic White Families

Cumulative adversity. For non-Hispanic White families ($N = 989$), socioeconomic adversity factor scores ranged from 0 to 4.46 ($M = 2.35$, $SD = 0.96$; see Table 1 for means, SDs, and frequencies of each of the indicators for each quintile of factor scores within each race-ethnic sample, and Table 2 for descriptive statistics of the final three created socioeconomic adversity variables).

Chronicity and timing. Descriptive statistics within quintile distributions revealed a clear pattern with respect to our theoretically informed and sample-based indicator thresholds (see Table 1). We determined that families in the top three quintiles (experiencing lower socioeconomic adversity) tended to be married, with at least some college or technical school experience, an income of \$35,000-\$49,000 or higher, access to private healthcare insurance, and no material hardships. In comparison, families in the bottom two quintiles (experiencing higher socioeconomic adversity) were more likely to have annual household incomes below \$34,999, lack a college degree, be in single or cohabiting households, lack access to healthcare insurance or report having publicly funded healthcare insurance, and had experienced at least one or more material hardship.

The chronicity and timing socioeconomic adversity variables for non-Hispanic White families were then created based on these cut-offs. Families in the higher socioeconomic adversity quintiles (i.e., 4 and 5) for two or more time-points were considered to be experiencing “chronic” socioeconomic adversity, and those who were the higher socioeconomic adversity quintiles (i.e., 4 and 5) at Years one or three (or both) were considered to be experiencing “early” socioeconomic adversity. For Non-Hispanic White families, cumulative socioeconomic adversity scores ranged from 0 to 13.42 ($M = 7.05$, $SD = 2.90$; see Table 2). Forty percent of the sample experienced *chronic* socioeconomic adversity during the child’s first five years and 41% experienced *early* socioeconomic adversity during this period.

Non-Hispanic Black Families

Cumulative adversity. For non-Hispanic Black Families ($N = 2,229$), socioeconomic adversity factor scores ranged from 0 to 5.08 ($M = 3.50$, $SD = 0.93$; see Table 1). Indicator thresholds for all except household income aligned with those identified using existing theory and literature. However, the mean annual household income for Black families was just below the \$15,000-\$24,999 category, therefore income equal to or lower than this was considered to be an indication of higher adversity.

Chronicity and timing. As seen in Table 1, the factor score cut point is not immediately apparent based on indicator descriptive statistics for each quintile. Although quintiles 3 to 5 were all clearly experiencing higher adversity based on our previously decided indicator thresholds, quintile 2 also appeared to be experiencing higher adversity on some of the indicators (e.g., 73% of families in quintile 2 were single or cohabiting, 66% had no healthcare insurance or publicly funded insurance). Therefore, these indicators were probed further to understand each quintile’s standing on these indicators relative to the rest of the sample. Since approximately 74% of Black families were single/cohabiting across the 3 timepoints, a frequency higher than this was considered higher adversity. Similarly, approximately 68% of the sample had publicly funded health insurance or no health insurance; therefore, frequencies higher than this were considered a reflection of higher adversity. With these indicator thresholds in place, the factor score cut point for Black families was quintiles 3 and higher (i.e., families in quintiles 3 or higher were considered to be experiencing “high adversity” while those in 1 or 2 were considered to be experiencing “lower adversity”). Chronicity and timing socioeconomic adversity variables for non-Hispanic

Black families were therefore calculated as following: those who were in quintiles 3, 4, or 5 for two or more time-points were considered to be experiencing “chronic” socioeconomic adversity, and those who were in quintiles 3 or higher at Years 1 or 3 (or both) were considered to be experiencing “early” socioeconomic adversity. As seen in Table 2, cumulative socioeconomic adversity scores within Black families ranged from 0 to 15.34 ($M = 10.54$, $SD = 2.79$), 60% of the sample experienced *chronic* socioeconomic adversity, and 61% of the sample experienced *early* adversity.

Hispanic Families

Cumulative adversity. For Hispanic families ($N = 1,267$), socioeconomic adversity factor scores ranged from 0 to 5.30 ($M = 3.74$, $SD = 0.91$; see Table 1). Similar to Black families, the mean annual household income for Hispanic families was just below the \$15,000 to \$24,999 bracket. Therefore, mean income levels less than this (a lower threshold than theoretically determined based on past literature) were considered an indication of higher socioeconomic adversity.

Chronicity and timing. Although the socioeconomic adversity indicators in quintiles three to five were clearly above the predetermined “higher adversity” thresholds within the Hispanic sample, quintile two was not as clear cut. Specifically in quintile two, 25% of the sample had an education level of ‘less than high-school’, and 61% did not have healthcare insurance or had publicly funded healthcare. On probing these indicators further, it was found that ~ 40% of the sample across all three timepoints had ‘less than high-school’ education level, and ~ 65% of the sample had publicly funded healthcare insurance or no healthcare insurance. Therefore, frequencies higher than this were considered to reflect higher relative adversity. With this in mind, quintile 3 was determined as the factor score cut point, i.e., families in quintiles 3, 4, and 5 were flagged as experiencing “higher adversity” whereas those in quintiles 1 and 2 were considered to be experiencing “lower adversity”. Socioeconomic adversity timing and chronicity variables were therefore calculated in the same way as for Black families. Within the Hispanic sample, cumulative socioeconomic adversity scores ranged from 0 to 15.82 ($M = 11.07$, $SD = 2.74$), 60% of the sample experienced *chronic* socioeconomic adversity, and 61% of the sample experienced *early* socioeconomic adversity (see Table 2).

Hypothesis Test Results

Our second aim was to examine the associations between socioeconomic adversity during the child's birth-5-year period and mothers' positive parenting when the child was 9, and our third aim was to test whether the associations between socioeconomic adversity and mothers' positive parenting was moderated by various forms of mother's social capital when the child was 3 and 5. Results for each race-ethnic sample are discussed in this section, in decreasing order of sample size.

Non-Hispanic Black Families

Within Black families, our first hypothesis was supported as higher levels of cumulative socioeconomic adversity were associated with lower levels of positive parenting ($\alpha_1 = -.33, p = .001$), and both chronic ($\alpha_1 = -.72, p < .001$) and early ($\alpha_1 = -.73, p < .001$) socioeconomic adversity were linked to lower levels of positive parenting (see Table 4). Although none of the social capital variables were independently associated with positive parenting, results showed interactions between cumulative, chronic, and early socioeconomic adversity and mothers' social participation when the child was 3–5 years old (Cumulative SA $\alpha_{13} = .33, p = .004$; Chronic SA $\alpha_{13} = .69, p = .002$; Early SA $\alpha_{13} = .65, p = .004$). Supporting our second hypothesis, tests of simple slopes revealed that the negative associations between socioeconomic adversity and positive parenting were strongest for mothers who did *not* participate in any social activities when the child was three or five (Cumulative SA $\beta = -.30, p = .003$; Chronic SA $\beta = -.72, p < .001$; Early SA $\beta = -.73, p < .001$) compared to those who participated in one or more activities (Cumulative SA $\beta = 0.00, p = .99$; Chronic SA $\beta = -.03, p = .85$; Early SA $\beta = -.08, p = .55$). See Appendix A, Figures A.2. (a)–(c) for graphical presentations of these interaction effects. That is, within Black families, social participation attenuated the negative effects of cumulative, chronic, and early socioeconomic adversity on mothers' positive parenting behaviors at Year nine.

Hispanic Families

Although bivariate correlations were in the expected directions (see Appendix A, Table A.4.), neither of our hypotheses were supported for Hispanic families. Socioeconomic adversity during the birth-5-year period was not associated with positive parenting at Year 9 (for any of the

socioeconomic adversity variables; see Table 5), and none of the social capital variables moderated the socioeconomic adversity-positive parenting associations. However, mothers' perceived neighborhood cohesion when the child was 3–5 years old was positively independently associated with their positive parenting behaviors at Year 9 (Cumulative SA $\alpha_2 = .21, p < .05$; Chronic SA $\alpha_2 = .20, p < .05$; Early SA $\alpha_2 = .21, p < .05$).

Non-Hispanic White Families

Correlations among key study variables and covariates were in the expected direction (see Appendix A, Table A.5). Overall, within White families our first hypothesis was not supported, as none of the variables tapping into socioeconomic adversity within the birth-5-year period were associated with mothers' positive parenting behaviors at Year 9 (see Table 6). Interestingly however, there was evidence of an interaction between cumulative socioeconomic adversity and perceived neighborhood social control (Cumulative SA $\alpha_{13} = .20, p = .01$) such that there was a negative association between socioeconomic adversity and positive parenting only for mothers who reported lower levels of perceived neighborhood control when the child was 3–5 years old ($\beta = -.30, p = .01$; see Appendix A, Figure A.3.) but not for mothers who reported average ($\beta = -.10, p = .34$) or high ($\beta = -.10, p = .40$) levels of neighborhood control. This is in line with our second hypothesis that higher levels of social capital would protect mothers from the negative effects of socioeconomic adversity. However, this interaction effect was not found for chronic or early socioeconomic adversity.

DISCUSSION

Existing literature has established that socioeconomic adversity is multifaceted, comprising of multiple different risk indicators, and that *chronic* and *early* socioeconomic adversity are particularly detrimental to parenting and child outcomes. Additionally, warm and positive parenting behaviors are known to be severely compromised in the context of socioeconomic adversity, but researchers have found evidence to suggest that various forms of social capital, such as social support and neighborhood cohesion and control, may buffer parents (particularly mothers in mother-headed families) from the negative effects of socioeconomic adversity. This paper extends existing literature by taking advantage of a diverse race-ethnic sample to describe

socioeconomic adversity experienced during early childhood and its longitudinal impacts on parenting separately within non-Hispanic Black, Hispanic, and non-Hispanic White families. Importantly, we demonstrated a novel method of capturing socioeconomic adversity that would be equally valid within Black, Hispanic, and White samples, and that tap into the severity, chronicity, and timing of socioeconomic adversity of each family relative to other families *within* the same race-ethnic group.

With these measures of socioeconomic adversity, we found that for non-Hispanic Black families, cumulative, chronic, and early socioeconomic adversity were all associated with lower levels of mothers' positive parenting when the child was nine. For non-Hispanic White families, cumulative socioeconomic adversity was associated with lower levels of positive parenting but only for those mothers who reported low levels of perceived neighborhood control. However, for Hispanic families there was no evidence indicating an association between socioeconomic adversity and positive parenting. Additionally, we found that social participation attenuated the effects of socioeconomic adversity on positive parenting for non-Hispanic Black families, and neighborhood social control attenuated the effects of cumulative socioeconomic adversity on positive parenting for non-Hispanic White families. No interaction effects were found within Hispanic families, but neighborhood cohesion was independently associated with higher levels of positive parenting within this sample.

In this section we first briefly discuss any unexpected results from our measurement construction of socioeconomic adversity, and then discuss findings relevant to our study hypotheses within each race-ethnic sample.

Measuring Socioeconomic Adversity

Although there is extensive literature establishing that material hardship is a key component of socioeconomic adversity experienced by Black and Hispanic families (Conger et al., 2010; Iceland & Bauman, 2007; Neckerman et al., 2016), and despite high frequencies (>50%) of “one or more” material hardships that were endorsed by Black and Hispanic families across all three early childhood waves in our sample (see Appendix A; Table A.1.), material hardship did not load onto our measure of socioeconomic adversity within either the non-Hispanic Black or Hispanic sample. Although contrary to our expectations, these results deserve consideration for multiple reasons. First, experiences of material hardship are not restricted to families who are

experiencing the greatest socioeconomic risk; in fact, studies have found that a substantial fraction of non-poor but low-income families often experience one or more material hardships such as having utilities turned off because of the inability to pay bills, or not having enough food to feed the family (Boushey et al., 2001; Meadows et al., 2009; Raver et al., 2007). In line with this, there is mixed evidence regarding whether material hardship is correlated with income poverty and other more traditional indicators of socioeconomic risk, with some researchers finding weak links (e.g., Mayer & Jencks, 1989) and others more establishing stronger associations between the constructs (e.g., Iceland & Bauman, 2007). Taken together, these findings suggest that the types of material hardships experienced vary with income, with recent evidence indicating that hardships such as food and housing difficulties often occur within much higher income brackets than generally thought (Rodems & Shaefer, 2020). Therefore, although a large percentage of Black and Hispanic families may experience one or more material hardships (as is the case in the FFCWS), these experiences may not necessarily “hang together” with other traditional markers of socioeconomic disadvantage, especially considering the lower overall levels of income and educational attainment (as compared with White families) seen in our sample of Black and Hispanic families across the early childhood years. This is echoed in a recent study that found that non-Hispanic White families constituted the largest percentage of low-income parents to report material hardships (Karpman et al., 2018).

Second, measurements of material hardships may need to be more nuanced than the one we included in our CFA to fully capture the spectrum of hardships that Black and Hispanic families may face. Our measure of material hardship consisted of enforced yes/no response options to fairly specific experiences such as not being able to pay a full month’s rent, receiving free meals or food due to insufficient money, needing to move in with others due to financial problems, and borrowing money from friends or family to help pay bills. However, research has established that the financial ability to meet basic needs lies along a spectrum and is more dynamic than static in nature (e.g., see Daundasekara et al., 2021 for an example of more nuanced hardship trajectories within the FFCWS). Therefore, our dichotomous measure of material hardship could have obscured variations in the types and severity of hardships experienced across different race-ethnic groups, especially with regard to food insecurity and housing instability, both of which have been shown to disproportionately contribute to economic disadvantages particularly within immigrant populations of color (Huang & King, 2018).

Finally, researchers have found that “in-kind” or instrumental assistance and support from friends and family may alleviate the detrimental socioeconomic impacts resulting from material hardships (Campbell & Pearlman, 2019; Kang, 2013; Pilkauskas et al., 2014). This has found to be especially true for ethnically diverse urban families, for whom family support may be a protective factor that buffers them from the negative effects of material hardship (Riina et al., 2016). This could be another reason why material hardship did not contribute to our measure of socioeconomic adversity for non-Hispanic Black and Hispanic samples within our study.

Also contrary to our expectations was the finding that marital status was not a meaningful indicator of socioeconomic adversity within Hispanic families. However, this finding is not entirely contradictory to existing literature, some of which suggests that the links between family structure and child and family wellbeing tend to be more prominent in White compared to Black and Hispanic families (e.g., Heard 2007; Manning & Brown, 2006). Researchers posit that mother-headed families tend to be more strongly associated with disadvantage within relatively *advantaged* groups, whereas the association may be weaker among race-ethnic minority communities, potentially due to the higher prevalence (and therefore, social acceptance) of more nontraditional family structures in these populations (S. L. Brown et al., 2015). There is also a hypothesis that since race-ethnic minority families are already dealing with a number of other structural disadvantages that confer high levels of stress, they may have support systems in place that enable them to deal with transitioning family structures with more ease than more advantaged populations (e.g., see Cavanagh & Fomby, 2019). There is evidence corroborating this within the FFCWS sample specifically, with researchers finding that transitioning out of a two-parent family structure was more detrimental for White compared to Hispanic youth (D. Lee & McLanahan, 2015).

Although our socioeconomic adversity measurement results cannot be generalized without being replicated, they nevertheless provide an important first step towards assessing the contributions of five key socioeconomic risks to experiences of adversity separately within each of the three major race-ethnic groups in the U.S. Overall, our findings reconfirm the evidence that families experiencing high levels of socioeconomic adversity are likely to face co-occurring hardships along with income poverty, such as difficulties in paying for utilities and services or necessities like food and clothing (Conger et al., 2010; Neckerman et al., 2016) and a lack of access to healthcare (Anand et al., 2019). Additionally, that income poverty is highly likely to overlap

with lower education levels and households headed by single or cohabiting mothers (Semega et al., 2019). These findings are particularly salient in highlighting the socioeconomic contexts that mother-headed families often occupy—however, it is important to note here that single motherhood is not implicated as a *cause* of poorer socioeconomic contexts, but rather that it often *coincides* with greater socioeconomic disadvantages, as has been repeatedly established in previous literature (Damaske et al., 2017; McLanahan & Jacobsen, 2015).

Effects on Parenting and the Protective Role of Social Capital

Our findings that for non-Hispanic Black and non-Hispanic White mothers, aspects of social capital attenuate the longitudinal effects of early childhood socioeconomic adversity on later positive parenting is in line with existing research. Numerous studies have found that a lack of social and community cohesion and control is likely to heighten the negative effects of socioeconomic disadvantages on parenting behaviors (Ceballo & McLoyd, 2002; Choi et al., 2018; Chung & Steinberg, 2006; Cuellar et al., 2013; Vieno et al., 2010). However, our findings extend prior research by pinpointing aspects of social capital that are uniquely relevant buffers against socioeconomic disadvantages within non-Hispanic Black and White families.

Among non-Hispanic Black families, social participation emerged as a particularly strong protective factor that buffered mothers from the negative effects of parenting. Specifically, although cumulative, chronic, and early socioeconomic adversity during early childhood were all independently associated with decreased positive parenting at Year 9 in Black families, these associations were mitigated in the context of Black mothers who took part in *any* social activities (such as attending church, being involved in groups working with children, participating in political or civic groups, community organizations, etc.) when the focal child was 3–5 years of age. Although the literature assessing social and community participation as a protective factor specifically is not extensive, prior research suggests that religious and other forms of social participation are linked with increased psychological and physical wellbeing (McCloskey & Maguire-Jack, 2021), which could enable parents to engage in positive parenting behaviors despite their exposure to adversity. Additionally, religious participation among low-income Black families (both urban and rural) has been linked to more cohesive family environments, lower interparental conflict, and greater parental satisfaction coupled with lower distress (Brody et al., 1996; Hill et al., 2008).

Historically, Black families have been found to have strong ties to extended community, church, and kinship networks (Ceballo & McLoyd, 2002). Researchers have found that community engagement among Black parents is linked to greater parent-to-parent communication within communities and more positive child outcomes (Hunter et al., 2019), suggesting that positive parenting practices may be a mechanism through which community engagement might influence youth outcomes. Research also suggests that religious wellbeing among low-income Black women primary caregivers in particular is associated with reduced parental stress (Lamis et al., 2015). Therefore, it could also be that church-related involvement in particular is driving the protective effect of social participation on positive parenting for Black mothers in the FFCWS. Since we could not test the moderating effects of different forms of social participation in the current analysis, future research should replicate this within other samples to identify the types of social or community participation activities that may be particularly protective for Black families.

For White families, perceptions of neighborhood social control impacted the extent to which socioeconomic adversity longitudinally affected positive parenting such that cumulative socioeconomic adversity only negatively affected positive parenting in the context of *low* neighborhood social control. Neighborhood social control pertains to actions taken by community members to collectively sustain order and prevent crime (Dorsey & Forehand, 2003). Studies have found that perceptions of low informal neighborhood social control are associated with greater odds of child abuse and neglect in economically disadvantaged communities (B. Kim & Maguire-Jack, 2015), that perceptions of greater informal social control may lower parenting stress (and therefore facilitate positive parenting behaviors) by creating a greater sense of neighborhood safety for parents. Although there has been mixed evidence regarding the role of informal social control in parenting specifically within the FFCWS sample (see Barnhart & Maguire-Jack, 2016), our findings suggest that it may be a particularly salient protective factor for non-Hispanic White mother-headed families.

Contrary to our expectations, socioeconomic adversity did not have a negative effect on later positive parenting among Hispanic families, and this did not differ based on levels of social capital. This finding is contradictory to research indicating that Hispanic mothers experience high levels of parenting stress, and that most of this stress is explained by structural factors such as income and English proficiency (Nomaguchi & House, 2013). However, our finding is in line with past research indicating that neither family income nor material hardship were found to impact

positive parenting behaviors in Hispanic families (Cassells & Evans, 2017; Raver et al., 2007). Further research is needed to understand why socioeconomic factors, although linked to parental stress, did not seem to affect positive parenting behaviors within Hispanic families in the FFCWS.

Consistent with prior research however, perceived neighborhood social cohesion during the child's 3–5-year period was independently associated with mothers' positive parenting behaviors when the child was 9 within Hispanic families. Researchers have shown that perceptions of neighborhoods as being close-knit, sharing the same values, and of neighbors being willing to help each other out, are linked to lower parental stress and maternal anxiety and depression (Choi et al., 2018; Maguire-Jack & Wang, 2016; McCloskey & Pei, 2019), which in turn is likely to allow parents to engage in more effective and positive parenting behaviors. In addition, neighborhood collective efficacy been found to be particularly protective for Hispanic low-income families (Ma & Klein, 2018). Our findings extend prior research in confirming the importance of neighborhood social cohesion for Hispanic families, especially within the context of socioeconomic adversity.

Conclusions

With this study, our aim was to examine the impact of socioeconomic adversity on warm, responsive parenting behaviors separately within Black, Hispanic, and White families, and pinpoint protective factors that could disrupt these potential family stress processes. Our findings, separately examined and discussed within each race-ethnic sample, add to the Family Stress Model literature and offer new insights into race-ethnic-specific contextual factors that may enable mothers to engage in positive parenting despite their exposure to socioeconomic risks. In this section we discuss the limitations of our study, offer future directions for research, and conclude by highlighting the study's strengths and implications.

Limitations and Future Directions

Our results should be viewed in the light of a number of methodological and analytical limitations. First, certain data decisions were made with regard to the socioeconomic adversity indicators that, although theoretically and analytically sound, could have obscured potential heterogeneities in families' experiences. Specifically, backed by literature indicating that single-

mother and cohabiting families tend to experience similarly distinct socioeconomic risks and associated child outcomes compared to married families (Mather, 2010; McLanahan et al., 2001; Meadows et al., 2009), and due to the complexity of conducting a multi-group CFA with a mix of continuous, binary, ordinal, and nominal indicators with FIML, we made the decision to collapse single and cohabiting mothers into one category. Although we conducted descriptive analyses to ensure that cohabiting and single mothers within the FFCWS were more similar than different on the other socioeconomic risk indicators before collapsing them into a single category, there is also evidence showing that there may be important distinctions between these family structures particularly with regard to parenting. For instance, cohabiting or married mothers have been found to benefit from living with someone with whom they can share the stresses of parenthood (Copeland & Harbaugh, 2005); although this finding was not replicated among a sample of low-income Mexican American mothers (Cardoso et al., 2010). Nevertheless, these nuances in the effects of socioeconomic adversity on parenting across diverse family structures may have been obscured in our analyses. Future research should therefore test for differences in socioeconomic adversity, parenting, and child outcomes across single, cohabiting, and married family structures.

Second, although it is a strength of our study that multiple reporters were included in our analyses, it should be noted that positive parenting was measured at a single time point using interviewer observations. This measure is well-validated and has been used across diverse populations (Caldwell & Bradley, 2003) but may not reflect parents' stable warm or nurturing parenting behaviors across time and contexts. There could also be an element of social desirability in the behaviors mothers engaged in in front of study interviewers. Therefore, these findings should be replicated using child or parent self-report measures of parenting. Additionally, in using this measure our analytic sample was reduced by a considerable number due to mothers not participating in the in-home surveys in the follow-up waves. Therefore, we may have been underpowered to detect smaller effect sizes, particularly in the Hispanic and non-Hispanic White samples.

Finally, although we used a broad conceptualization of social capital and tapped into multiple dimensions of this construct, we did not account for culturally specific protective factors that may play particularly salient roles in influencing parenting outcomes for Hispanic mothers. For instance, researchers have found that acculturation affects the extent to which neighborhood factors are associated with supportive parenting in Mexican American mothers, and that values of

familism (broadly, beliefs regarding the centrality of the family in the individual's life) influence the extent to which these mothers access support from family and friends in the context of disadvantage (Barnett et al., 2016). Additionally, researchers have shown that for Hispanic mothers, support from extended kin networks may be a particularly important protective factor (Cardoso et al., 2010), something that was not specifically asked about in the measures we used to assess social support. Last, growing evidence has emphasized the importance of disentangling immigration-related experiences from socioeconomic disadvantage for Hispanic families (Roosa et al., 2002; Schwartz et al., 2010), something is likely to be relevant within the FFCWS given that 39% of Hispanic mothers in our sample were born outside the U.S. (see Table 3). Therefore, since we didn't account for acculturation, familism, and other culturally relevant risk and protective factors in our analyses, our findings regarding the experiences of Hispanic mothers facing socioeconomic adversity should be interpreted with caution.

Strengths and Implications

There are several strengths inherent to our study that lend notable implications to our findings and offer avenues for future research. First, our findings are strengthened by the use of longitudinal data and variables that tap into multiple dimensions of both socioeconomic adversity and social capital across time. Relatedly, our analyses included multiple reporters across study variables which reduced reporter bias and used FIML to account for missing data. Second, to the best of our knowledge this is the first study to employ multi-group confirmatory analysis to build measures of socioeconomic adversity that are uniquely valid *within* non-Hispanic Black, Hispanic, and non-Hispanic White families. Importantly, our measures use both seminal and current evidence (Anand et al., 2019; Conger & Donnellan, 2007; Gershoff et al., 2007; Roy & Raver, 2014) to test a comprehensive set of socioeconomic risks that are likely to contribute to experiences of adversity across race-ethnic groups. Importantly, the measure was constructed in such a way that it can be used to tap into not only the *severity* of socioeconomic adversity across a longitudinal period, but also the *chronicity* and *timing* of the adversity experienced, all of which have important implications for child and family outcomes. And most notably, findings from our measurement construction point to distinctions in the weightage of different socioeconomic risk indicators across race-ethnic groups within the FFCWS. Although this finding cannot be generalized to broader populations given the oversampling of non-married and low-income mothers in urban areas in the

U.S., it nevertheless points to the necessity of accounting for different manifestations of poverty and its related adversities across race-ethnic lines in future research. Broadly therefore, this measure contributes to ongoing efforts to unpack the complexities of socioeconomic adversity particularly in the context of child and family wellbeing.

Finally, due to the diversity of the FFCWS sample we were able to pinpoint salient protective and promotive factors of positive parenting that are specific to each of the three major race-ethnic groups in the dataset. Although an increasing number of researchers have looked at positive processes within race-ethnic minority families in the past decade, child and family wellbeing in these populations continues to be assessed predominantly through a deficit lens. Our study instead offers a strength-based perspective in pinpointing contextual assets that can be leveraged to facilitate resilient parenting across time in non-Hispanic Black, Hispanic, and non-Hispanic White families. By conducting multi-group analyses rather than controlling for race as a covariate, we were able to specify different social capital mechanisms that may be particularly pertinent to parenting outcomes within each race-ethnic group. Since researchers have found that family-based programming that is culturally specific and tailored to the target population it is intended for increases participant engagement and shows better intervention effectiveness (Kumpfer et al., 2017), this study strength has important implications for intervention and policy efforts aimed at enhancing parenting practices in families facing socioeconomic adversity.

Table 1. Descriptive Data of Socioeconomic Adversity Factor Scores and Indicator Variables by Quintile for Each Race-Ethnicity

WHITE FAMILIES (N = 989)						
Quintiles	Factor Score	Income	Education	Marital Status	Health Insurance	Material Hardship
1 (n=200)	0.94 (0.37)	3.44	College/grad (92%)	Married (95%)	Private (95%)	None (92%)
2 (n=197)	1.81 (0.20)	4.91	Some coll./tech (47%)	Married (87%)	Private (90%)	None (79%)
3 (n=197)	2.42 (0.16)	6.10	Some coll./tech (46%)	Married (56%)	Private (65%)	None (56%)
4 (n=198)	2.95 (0.15)	7.08	H.S/equiv. (37%)	Single/co (72%)	Public/none (75%)	One+ (56%)
5 (n=197)	3.63 (0.31)	8.43	Less than H.S. (49%)	Single/co (90%)	Public/none (92%)	One+ (69%)
BLACK FAMILIES (N = 2,229)						
Quintiles	Factor Score	Income	Education	Marital Status	Health Insurance	
1 (n=446)	2.06 (0.54)	5.43	Some coll./tech (51%)	Married (48%)	Private (76%)	Low Adversity
2 (n=446)	3.09 (0.20)	7.18	Some coll./tech (48%)	Single/co (73%)	Public/none (66%)	
3 (n=446)	3.63 (0.13)	8.24	H.S/equiv. (47%)	Single/co (84%)	Public/none (87%)	High Adversity
4 (n=452)	4.07 (0.14)	8.85	H.S/equiv. (49%)	Single/co (89%)	Public/none (91%)	
5 (n=439)	4.66 (0.22)	9.50	Less than H.S. (78%)	Single/co (91%)	Public/none (92%)	
HISPANIC FAMILIES (N = 1,267)						
Quintiles	Factor Score	Income	Education	Health Insurance		
1 (n=254)	2.33 (0.56)	5.54	Some coll./tech (48%)	Private (68%)	Low Adversity	
2 (n=253)	3.30 (0.18)	7.17	H.S/equiv. (37%)	Public/none (61%)		
3 (n=257)	3.88 (0.14)	8.19	Less than H.S. (43%)	Public/none (84%)	High Adversity	
4 (n=251)	4.33 (0.12)	8.66	Less than H.S. (61%)	Public/none (85%)		
5 (n=252)	4.84 (0.21)	9.43	Less than H.S. (87%)	Public/none (90%)		

Note. See Appendix A, Table A.1 for full list of categories within each indicator variable. H.S. = high school; Double red lines indicate factor score cut points that were decided based on theoretically relevant and sample-specific thresholds.

Table 2. Descriptive Data of Final Socioeconomic Adversity Variables

Socioeconomic Adversity (SA) Variable	Non-Hispanic Black (<i>N</i> = 2,229)	Hispanic (<i>N</i> = 1,267)	Non-Hispanic White (<i>N</i> = 989)
Cumulative SA: Mean (SD)	10.54 (2.79)	11.07 (2.74)	7.05 (2.90)
SA Chronicity: Chronic <i>N</i> (%)	1342 (60.21%)	757 (59.75%)	396 (40.04%)
SA Timing: Early <i>N</i> (%)	1369 (61.42%)	770 (60.77%)	410 (41.46%)
SA Chronic AND Early <i>N</i> (%)	1342 (60.20%)	757 (59.74%)	396 (40.04%)

Table 3. Descriptive Data of Key Study Variables in Paper 1

	Non-Hispanic Black (<i>N</i> = 1,556)		Hispanic (<i>N</i> = 793)		Non-Hispanic White (<i>N</i> = 635)	
	Mean	SD	Mean	SD	Mean	SD
Socioeconomic Adversity						
Cumulative	10.5	2.69	10.92	2.78	6.86	2.89
Chronicity	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Transient/low</i>	625	40.17	336	42.37	392	61.73
<i>Chronic</i>	931	59.83	457	57.63	243	38.27
Timing						
<i>Late</i>	605	38.88	328	41.36	382	60.16
<i>Early</i>	951	61.12	465	58.64	253	39.84
Social Capital (Y3 & 5)						
Neighborhood Cohesion	2.46	0.86	2.58	0.8	2.91	0.79
Neighborhood Control	2.81	1.01	2.76	1.02	3.15	0.84
Social Support & Trust	3.95	1.24	4	1.22	4.52	0.89
Social Participation	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>None</i>	580	37.28	391	49.31	203	31.97
<i>Any</i>	884	56.81	318	40.1	404	63.62
Positive Parenting						
Year 5	9.35	2.57	10.08	2.26	10.61	1.97
Year 9	8.66	1.87	8.46	2.01	9.14	1.73
Covariates (Baseline)						
Mother's age	24.33	5.62	24.73	5.88	27.3	6.44
Mother's no. of bio kids	2.28	1.36	2.04	1.3	1.84	1.04
Mother's age at 1 st birth	20.26	4.19	21.29	4.93	24.7	6.14
Child sex	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
<i>Female</i>	748	48.07	383	48.3	304	47.87
<i>Male</i>	808	51.93	410	51.7	331	52.13
Mother: Anxiety at Y1						
<i>No</i>	1423	91.45	724	91.3	592	93.23
<i>Yes</i>	48	3.08	21	2.65	22	3.46
Mother: Depression at Y1						
<i>No</i>	1216	78.15	650	81.97	522	82.2
<i>Yes</i>	257	16.52	95	11.98	92	14.49
Interview in Spanish						
<i>No</i>	1456	93.57	534	67.34	613	96.54
<i>Yes</i>	4	0.26	188	23.71	3	0.47
Mother Born in the U.S.						
<i>No</i>	50	3.21	309	38.97	22	3.46
<i>Yes</i>	1499	96.34	484	61.03	612	96.38

Table 4. Paper 1 Hypothesis Test Regression Results: Non-Hispanic Black Families

		Positive Parenting (Y9)					
		Cumulative SA		Chronic SA		Early SA	
		β	(SE)	β	(SE)	β	(SE)
Intercept	α_0	8.18 ***	(0.31)	8.60 ***	(0.33)	8.60 ***	(0.33)
Socioeconomic Adversity	α_1	-0.33 **	(0.10)	-0.72 ***	(0.18)	-0.73 ***	(0.19)
Neighborhood Cohesion	α_2	-0.01	(0.06)	0.00	(0.06)	-0.01	(0.06)
Neighborhood Control	α_3	0.05	(0.06)	0.04	(0.06)	0.05	(0.06)
Social Support & Trust	α_4	0.01	(0.06)	0.01	(0.06)	0.01	(0.06)
Social Participation	α_5	0.07	(0.11)	-0.33	(0.18)	-0.32	(0.19)
<u>Covariates</u>							
Mother's Age	α_4	0.04	(0.08)	0.04	(0.08)	0.03	(0.08)
Child Sex (Male)	α_6	-0.05	(0.10)	-0.05	(0.10)	-0.05	(0.10)
Number of Biological Children	α_7	0.04	(0.07)	0.05	(0.07)	0.05	(0.07)
Mom Age at First Birth	α_8	0.08	(0.08)	0.07	(0.08)	0.07	(0.08)
Mom Born in the US	α_9	0.51	(0.29)	0.51	(0.29)	0.52	(0.29)
Mom meets Anxiety criteria	α_{10}	-0.30	(0.31)	-0.32	(0.31)	-0.30	(0.31)
Mom meets Depression criteria	α_{11}	0.04	(0.14)	0.02	(0.14)	0.03	(0.14)
Positive Parenting (Y5)	α_{12}	0.21 **	(0.07)	0.21 **	(0.07)	0.21 **	(0.07)
SA*Social Participation interaction	α_{13}	0.33 **	(0.12)	0.69 **	(0.22)	0.65 **	(0.23)

Note. $N = 1,556$. Unstandardized estimates presented, with standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 5. Paper 1 Hypothesis Test Regression Results: Hispanic Families

			Positive Parenting (Y9)					
			Cumulative SA		Chronic SA		Early SA	
			β	(SE)	β	(SE)	β	(SE)
Intercept	α_0		8.41 ***	(0.23)	8.39 ***	(0.24)	8.36 ***	(0.24)
Socioeconomic Adversity	α_1		0.01	(0.09)	0.09	(0.17)	0.13	(0.17)
Neighborhood Cohesion	α_2		0.21 *	(0.09)	0.20 *	(0.09)	0.21 *	(0.09)
Neighborhood Control	α_3		-0.07	(0.09)	-0.07	(0.09)	-0.07	(0.09)
Social Support & Trust	α_4		-0.02	(0.09)	-0.01	(0.09)	-0.01	(0.09)
Social Participation	α_5		0.09	(0.16)	0.11	(0.16)	0.11	(0.16)
<u>Covariates</u>								
Mother's Age	α_4		0.17	(0.13)	0.17	(0.13)	0.17	(0.13)
Mom interviewed in Spanish	α_6		-0.45	(0.27)	-0.49	(0.27)	-0.49	(0.27)
Number of Biological Children	α_7		-0.03	(0.10)	-0.03	(0.10)	-0.03	(0.10)
Mom Age at First Birth	α_8		-0.14	(0.13)	-0.14	(0.13)	-0.14	(0.13)
Mom Born in the US	α_9		0.19	(0.23)	0.17	(0.23)	0.17	(0.23)
Mom meets Anxiety criteria	α_{10}		-1.38 **	(0.49)	-1.38 **	(0.49)	-1.39 **	(0.49)
Mom meets Depression criteria	α_{11}		0.49	(0.25)	0.48	(0.25)	0.48	(0.25)
Positive Parenting (Y5)	α_{12}		0.44 ***	(0.10)	0.45 ***	(0.10)	0.46 ***	(0.10)

Note. $N = 793$. Unstandardized estimates presented, with standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 6. Paper 1 Hypothesis Test Regression Results: Non-Hispanic White Families

		Positive Parenting (Y9)					
		Cumulative SA		Chronic SA		Early SA	
		β	(SE)	β	(SE)	β	(SE)
Intercept	α_0	9.01 ***	(0.41)	8.93 ***	(0.42)	8.93 ***	(0.42)
Socioeconomic Adversity	α_1	-0.07	(0.11)	0.11	(0.20)	0.14	(0.20)
Neighborhood Cohesion	α_2	-0.05	(0.09)	-0.03	(0.09)	-0.01	(0.09)
Neighborhood Control	α_3	-0.07	(0.09)	-0.14	(0.11)	-0.12	(0.12)
Social Support & Trust	α_4	0.05	(0.09)	0.08	(0.09)	0.08	(0.09)
Social Participation	α_5	0.21	(0.17)	0.23	(0.17)	0.24	(0.17)
<u>Covariates</u>							
Mother's Age	α_6	-0.14	(0.17)	-0.10	(0.17)	-0.10	(0.17)
Number of Biological Children	α_7	0.03	(0.11)	0.02	(0.17)	0.02	(0.11)
Mom Age at First Birth	α_8	0.29	(0.17)	0.31	(0.11)	0.31	(0.17)
Mom Born in the US	α_9	0.00	(0.40)	0.02	(0.17)	-0.01	(0.41)
Mom meets Anxiety criteria	α_{10}	0.46	(0.40)	0.46	(0.41)	0.46	(0.40)
Mom meets Depression criteria	α_{11}	0.09	(0.22)	0.07	(0.40)	0.08	(0.22)
Positive Parenting (Y5)	α_{12}	0.13	(0.11)	0.14	(0.22)	0.15	(0.11)
SA*Neighborhood Control interaction	α_{13}	0.20 *	(0.08)	0.25	(0.15)	0.19	(0.15)

Note. $N = 635$. Unstandardized estimates presented, with standard errors in parentheses. * $p < .05$, ** $p < .01$, *** $p < .001$.

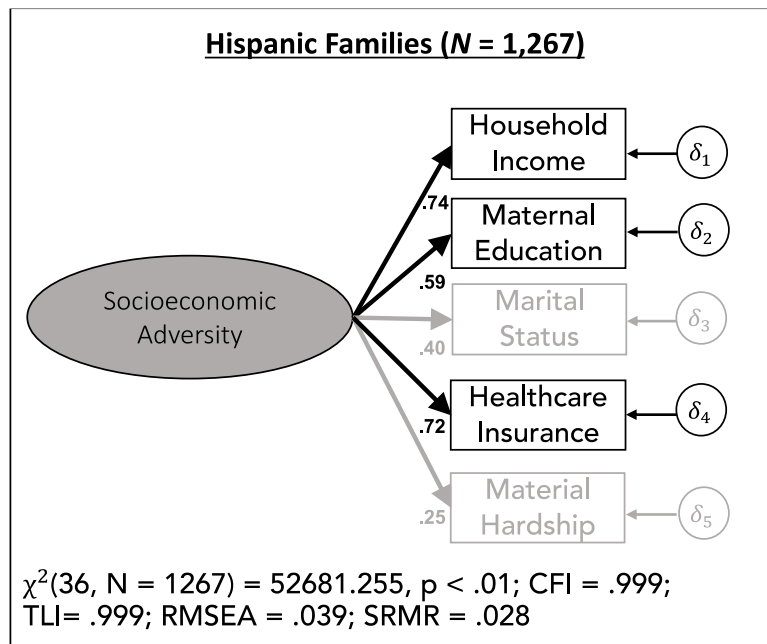
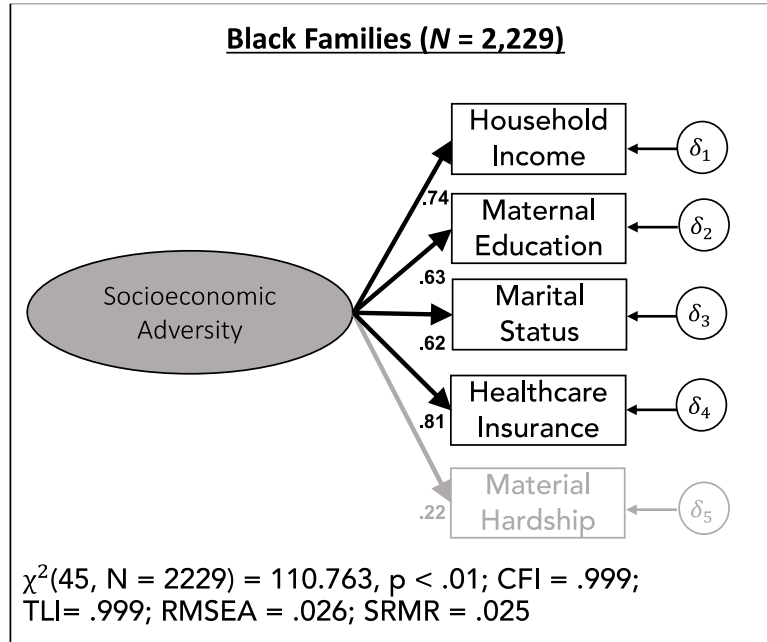
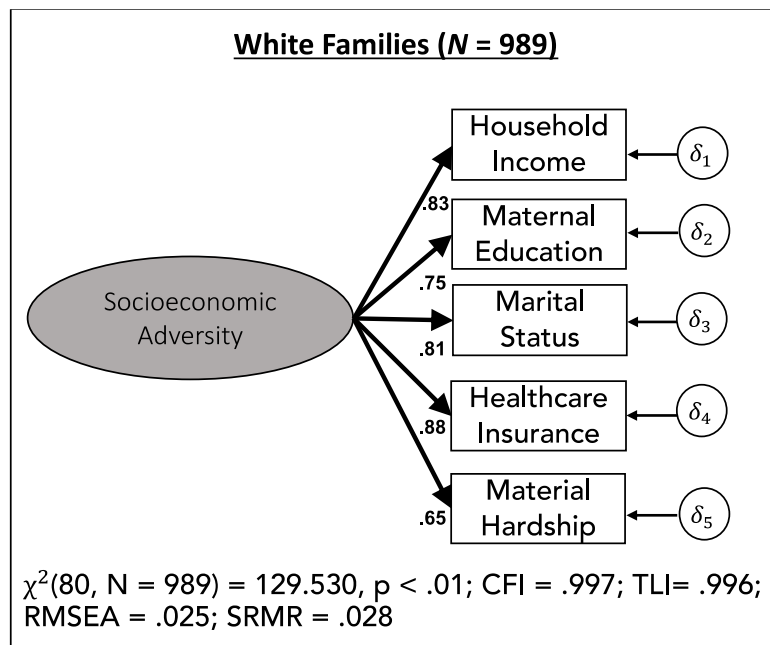


Figure 2. Socioeconomic Adversity Measurement Construction: CFA Results for (a) non-Hispanic Black Families, (b) Hispanic Families, (c) non-Hispanic White Families

Note. Indicators with factor loadings $< .04$ are indicated by grey paths and text. Final measurement models included only indicators with loadings $> .04$, and fit statistics from the final models are presented in the figures.

Figure 2 continued



CHAPTER 3. ADOLESCENT ADJUSTMENT IN THE CONTEXT OF SOCIOECONOMIC ADVERSITY: THE PROTECTIVE ROLE OF POSITIVE PARENTING (PAPER 2)

The detrimental effects of socioeconomic adversity on child and adolescent development are undeniable. A substantial body of research has found that adolescents living in families characterized by higher socioeconomic risk are more likely to experience poorer emotional and behavioral health outcomes as well as decreased psychological wellbeing (Bradley & Corwyn, 2002; Murry et al., 2011; Quon & McGrath, 2014). Adolescents exposed to risks associated with low socioeconomic status (SES) are more likely to exhibit social problems, delinquent behavior and conduct problems, and attentional concerns (DeCarlo et al., 2011; Russell et al., 2016; L.G. Simons et al., 2016). Additionally, experiences of socioeconomic adversity have been linked to higher rates of substance use, externalizing problems, and depression (Doan et al., 2012; Goodman et al., 2005; Sariaslan et al., 2014), and lower rates of academic engagement (Simons & Steele, 2020) in adolescents. Although less often studied, researchers have also documented the negative effects of socioeconomic adversity on adolescent wellbeing outcomes such as positivity (Jeon & Neppl, 2016; Neppl et al., 2015), happiness, optimism, and hope (Burton & Phipps, 2008; Vacek et al., 2010; Yin et al., 2019) and life satisfaction and self-esteem (Chen et al., 2016).

Given these well-established negative effects of socioeconomic adversity on adolescent functioning, it is crucial to examine mechanisms through which these effects occur in order to identify potential targets for intervention and prevention efforts, as well as identify potential protective factors that can attenuate the negative pathways from socioeconomic adversity to adolescent adjustment outcomes. The present study examines the longitudinal impacts of socioeconomic adversity on both adolescent maladjustment (i.e., substance use) as well as positive adjustment (i.e., wellbeing) through the mediating mechanism of self-regulation, and assesses whether positive parenting acts as a protective factor by attenuating the indirect pathways from early socioeconomic adversity to adolescent adjustment.

Socioeconomic Adversity and Adolescent Adjustment

Early research linking socioeconomic disadvantage to adolescent adjustment has demonstrated that experiencing socioeconomic adversity is associated with higher levels of

adolescent maladjustment (including psychological distress, poor academic outcomes, conduct problems, and substance use; DuBois et al., 1994), as well as lower levels of positive adjustment in youth (including self-esteem, competence, and school performance and academic achievement; Felner et al., 1995). Subsequent research has since corroborated these pathways from socioeconomic adversity to both negative (e.g., Fava et al., 2019) and positive (e.g., Yin et al., 2019) adolescent outcomes. However, the vast majority of literature on socioeconomic adversity and adolescent outcomes continues to rely heavily on negative markers of adolescent adjustment in the context of risk.

This deficit focus has been challenged by Positive Youth Development (PYD) researchers, who stress the need to conceptualize adolescent adjustment in more holistic ways (Lerner et al., 2018). Specifically, research on socioeconomic adversity should examine its effects on both adolescent risky outcomes, as well as thriving outcomes, in order to present a more nuanced portrait of youth adjustment in the context of risk. Therefore, the current paper focuses on a salient marker of adolescent maladjustment (i.e., substance use), and of adolescent thriving (i.e., wellbeing; conceptualized as happiness, optimism, and connectedness) to better understand how overall adolescent adjustment is influenced by early socioeconomic adversity.

Indicator of Maladjustment: Adolescent Substance Use

Substance use is considered an especially salient marker of maladjustment during adolescence since it is linked to several long-term adverse outcomes including continued substance use and dependence, mental health concerns, and other psychosocial adjustment concerns in later on in adulthood (Irons et al., 2015). Additionally, adolescents are particularly vulnerable to substance use initiation and problematic use (Gray & Squeglia, 2018) due to increases in risky behavior, susceptibility to contextual influences, and as-yet underdeveloped logical reasoning and impulse control abilities seen during this developmental period (Steinberg, 2007). Exposure to socioeconomic adversity is considered to exacerbate this existing risk of substance use during adolescence, with a considerable body of research suggesting that low SES is linked to higher alcohol and nicotine use (Evans & Kutcher, 2011; Hanson & Chen, 2007; Kwon & Wickrama, 2014; Melotti et al., 2011). The prevalence of smoking, especially, is considered to be particularly high within socioeconomically disadvantaged youth (Cambron et al., 2018; Poonawalla et al., 2014). Stressors including parental unemployment and marital difficulties, both of which are

linked to socioeconomic adversity, have been shown to increase alcohol use in adolescents (King et al., 2009). Additionally, residential and family instability, which is particularly characteristic of single- and cohabiting-mother families experiencing socioeconomic adversity, has been associated with alcohol problems in adolescence (Haynie & South, 2005; Mok et al., 2016).

Despite the evidence linking socioeconomic adversity to adolescent substance use, it is interesting to note that the literature is not consistent across studies. When assessing different indicators of socioeconomic risk separately, the evidence is somewhat mixed: although some studies suggest that lower parental education is associated with increased substance use (e.g., Bachman et al., 2011), others have reported just the opposite, with lower parental education being linked to decreased levels of adolescent substance use (Piko & Fitzpatrick, 2007; Ritterman et al., 2009). Similarly, whereas high family income has been found to be uniquely protective against smoking, the same effect was not seen in the case of alcohol use, which could suggest that family-level socioeconomic factors may be particularly relevant for the development of early adolescent smoking (Cambron et al., 2018). These inconsistencies could be due to the fact that the accumulation of multiple risks or stressors has been found to be particularly relevant to the development of externalizing concerns and substance use in adolescence (Mason et al., 2016), whereas much of the literature on socioeconomic adversity and adolescent substance use has focused on single socioeconomic risk measures such as income or education. Therefore, it may be especially crucial to study the development of substance use in youth who experience multiple correlates of socioeconomic adversity (e.g., material hardship, parent unemployment, household chaos etc.) rather than just one.

The timing of exposure to socioeconomic adversity is also an important factor to consider when assessing substance use outcomes. Individuals who experience socioeconomic disadvantage during early childhood were found to be more likely to develop alcohol dependence by adulthood regardless of adult socioeconomic position (Poulton et al., 2002). Additionally, the strength of associations between socioeconomic correlates and substance use has been found to substantially weaken during late adolescence (Bachman et al., 2011; J. M. Wallace et al., 2009). These findings are consistent with the broader literature suggesting that socioeconomic adversity experienced during early childhood is likely to have a greater negative impact on later adjustment outcomes than adversity experienced during any other developmental stage (Bradley & Corwyn, 2002) since early childhood is a particularly sensitive period for neurodevelopment (Blair & Raver, 2012a,

2016). Given these findings, research that assesses the longitudinal impacts of early socioeconomic adversity on adolescent substance use is particularly critical.

Race-Ethnic Differences in Adolescent Substance Use

Research assessing the intersection of race and socioeconomic factors in the prevalence of youth substance use in the U.S. has revealed an interesting pattern of findings. For one, research has consistently found that in general, substance use is lower among Black youth than among their Hispanic and non-Hispanic White peers (Bachman et al., 2011; Johnston et al., 2019; Warheit et al., 1996; Watt, 2005) despite their disproportionately high rates of exposure to poverty, material hardship, substance availability and other substance-use risk factors (J. M. Wallace, 1999; J. M. Wallace et al., 2009). In another example of seemingly divergent findings, Bachman and colleagues (2011) found that although high proportions of Hispanic students surveyed in Monitoring the Future (the largest national youth substance use survey in the U.S.) had parents in the lowest category of education, their levels of substance use were, on average, notably lower than that of their White counterparts with parents in the same category of education. However, the findings regarding rates of substance use among Hispanic youth is more mixed, with some research suggesting that they exhibit the *highest* levels of use during early adolescence (P. Chen & Jacobson, 2012; Shih et al., 2010). Interestingly, one of the few studies considering the impacts of both race and SES on substance use found that higher SES was associated with increases in alcohol, marijuana, and cocaine use among adolescents, but only among White youth (Humensky, 2010). Therefore, the literature regarding the differential impacts of socioeconomic adversity on adolescent substance use across race-ethnicities is not clear; and deserves more attention.

Indicator of Thriving: Adolescent Wellbeing

Although the literature tracking maladaptive trajectories of youth development in the context of socioeconomic adversity is extensive, research examining youth wellbeing in this context is less common. Wellbeing in adolescence can be conceptualized as flourishing outcomes resulting from the dynamic interplay between individual characteristics and the developmental context over time (Benson & Scales, 2009), a definition that is consistent with a developmental systems perspective of youth development. Research that assesses wellbeing in samples of youth

who are at high risk often conceptualizes the construct as a lack of negative outcomes rather than the presence of positive, flourishing outcomes (Casanueva et al., 2012). However, it is well established by now that wellbeing is reflective of positive functioning across multiple domains and implies the presence of strengths and resources rather than the mere absence of behavioral or psychological problems (Kern et al., 2016). Therefore, it is important to study the presence of specific indicators of wellbeing, such as happiness, optimism, life satisfaction, and social connectedness in adolescence.

Early investigations into the links between socioeconomic factors and youth wellbeing found positive associations between family income and teen happiness as well as subjective wellbeing (Ash & Huebner, 2001; Burton & Phipps, 2008). Complementing this, McAuley and Layte (2012) found that socioeconomic contexts characterized by high levels of lifestyle deprivation and high proportion of single-mother families were associated with lower levels of children's self-reported happiness. Researchers have also found that higher SES is predictive of positive future-oriented goals and plans, whereas low SES may be linked to more vague expectations of the future (Schröder et al., 2011). This finding has been recently corroborated in Yin and colleagues' (2019) study of the impacts of family SES on teenagers' hope. This association may be due to the limited material and social resources that families experiencing socioeconomic adversity can provide their children to facilitate future goals and development (Conger & Donnellan, 2007). Given the limited research examining positive functioning in youth in the context of socioeconomic adversity, the effects of chronicity and timing of socioeconomic adversity on flourishing outcomes have yet to be examined.

Despite this evidence suggesting that experiences of socioeconomic adversity place adolescents at a risk of lessened wellbeing, researchers have also documented instances of low-income urban youth reporting relatively high levels of life-satisfaction and showing no effects of stress on positive affect (such as optimism, hope, and self-esteem; Vacek et al., 2010). This finding is supported by the resilience literature, which suggests that youth can flourish despite exposure to suboptimal environments given the presence of buffering mechanisms such as warm parenting, positive peer relations, and supportive relationships with adult mentors (Masten, 2014). Therefore, research that assesses mechanisms that lead to reduced wellbeing in adolescents exposed to socioeconomic adversity, as well as research pinpointing protective factors that buffer adolescents from these negative effects, is particularly necessary.

Race-Ethnic Differences in Adolescent Wellbeing

Adolescent wellbeing outcomes are especially understudied in the context of race-ethnic minority families, due to the deficit lens through which these youth are typically assessed (Cabrera, 2013; Travis & Leech, 2014). In general, researchers found have noted that Black youth appear to show higher levels of optimism than their Hispanic and White peers (Ey et al., 2005; Webber & Smokowski, 2018). Similarly, race-ethnic minority youth have been shown to have higher levels of aspirations, self-efficacy, and hope (e.g., van Laar, 2000). In an important study documenting subjective wellbeing outcomes in urban low-income, race-ethnic minority youth, Vacek and colleagues (2010) reported that the adolescents reported being relatively satisfied with their lives despite exposure to significant levels of socioeconomic stressors. Specifically, the authors reported that hope, optimism, and self-esteem were particularly salient indicators of wellbeing in race-ethnic minority youth facing high levels of stress. These findings suggest that dimensions of subjective wellbeing might be particularly crucial to foster in ethnic minority youth due to the protective effects they offer in the face of heightened socioeconomic risk.

The Mediating Role of Self-Regulation

Self-regulation can be defined as the set of intrinsic processes aimed at adjusting one's physiological and emotional states adaptively to meet contextual demands (Nigg, 2017). More specifically, self-regulation skills facilitate goal-oriented behavior and adaptive responses to emotionally and cognitively demanding stimuli through the effective regulation of thoughts, feelings, and behaviors (Posner et al., 2007). Self-regulation involves both *automatic* regulation (the rapid “fight or flight” response necessary in urgent or threatening situations) and *intentional* regulation (conscious, planned, and proactive responses necessary for achieving goals) (Blair & Dennis, 2010; Blair & Ursache, 2011). The current paper focuses exclusively on the role of intentional self-regulation (sometimes referred to as “top-down” processing) involving higher-order cognitive abilities such as attention and goal-oriented volitional behavior (Nigg, 2017).

Socioeconomic Adversity and Self-Regulation

Children living in families experiencing socioeconomic adversity are known to show considerable reductions in the accomplishment of self-regulation as a developmental task.

Specifically, several studies have demonstrated socioeconomic challenges are associated with poorer performance on self-regulation tasks, including working memory, inhibitory control, and attention shifting (Blair et al., 2011; Johnson et al., 2016; Sarsour et al., 2011). Socioeconomic risks that have been associated with impacted development of self-regulation in childhood include household income (Hackman et al., 2015), maternal education and occupation (Lipina et al., 2013), and disorganization in the home (Berry et al., 2016). Longitudinally, exposure to chronic poverty in childhood has been associated with poorer self-regulatory functioning in early childhood (Finch & Obradović, 2017; Raver et al., 2013), a finding that remains stable for later childhood self-regulation as well (Lawson et al., 2018; Lipina & Evers, 2017). Given the reliance of self-regulatory behavior on prefrontal cortex functioning (Spessot et al., 2004), it is logical that self-regulation may be particularly susceptible to the neurocognitive effects of chronic stress caused by prolonged exposure to adversity (Lackner et al., 2018; Ursache & Noble, 2016). In addition to the neurobiological implications of SES on regulatory behaviors, researchers have also found that the family instability (Sturge-Apple et al., 2017) and transitions to high-poverty neighborhoods (Roy et al., 2014) commonly experienced in low-SES mother-headed families have notable negative implications for self-regulation in childhood.

Complementing the broader literature regarding exposure to poverty and child outcomes, self-regulation researchers also document clear links between *cumulative*, *early*, and *chronic* exposure to socioeconomic risks and poorer self-regulation later in childhood (Doan et al., 2012; Evans & English, 2002; Raver et al., 2013). Taken together, these findings strongly suggest that children who live in families facing socioeconomic adversity, particularly those characterized by high levels of instability and disorganization in the home, are likely to show reductions in self-regulatory abilities.

Self-Regulation and Later Adjustment

Self-regulation is considered to be fundamental to the accomplishment of adaptive functioning throughout childhood (McClelland et al., 2017). In a seminal study assessing the links between self-regulation and youth adjustment, Eisenberg and colleagues (2001) recorded important regulation-related differences in children exhibiting externalizing and internalizing concerns from those who showed no problematic behavior. Specifically, children who rated high in internalizing behavior problems appeared to be over-controlled, with a lack of spontaneity and

flexibility seen in children with healthy adjustment, whereas children who exhibited externalizing problems tended to be under-controlled. Subsequent research has continued to confirm patterns of differential self-regulation and -control abilities among children with adjustment concerns (Buckner et al., 2009; Doan et al., 2012; Farley & Kim-Spoon, 2017). Specifically, self-regulatory behaviors in youth have been positively associated with positive outcomes including social competence, confidence, connection, caring and contribution to society in adolescence (Bowers et al., 2011; Gestsdóttir & Lerner, 2008; Mueller et al., 2011), and negatively related to indicators of maladjustment in youth, such as conduct problems, depression and anxiety, and substance use behaviors (Crespo et al., 2019; Piehler et al., 2012; Raver et al., 2017). A recent meta-analysis assessing the associations of self-regulation in childhood to later outcomes revealed that higher self-regulation during early school years is linked to better performance in mathematics and literacy and lower levels of depressive symptoms, aggressive behavior, obesity, cigarette smoking and illicit drug use in the later school years (Robson et al., 2020).

Given these well-established links between socioeconomic adversity and self-regulation, and self-regulation and adolescent adjustment outcomes, it is highly likely that self-regulation would play a crucial mediating role in the association between early childhood socioeconomic adversity and adolescent adjustment. In fact, there is increasing evidence that one of the primary pathways through which poverty-related adversity might exert its negative influence on youth is through neurocognitive mechanisms (see Blair & Raver, 2012b; 2016). This suggests that the effects of chronic early life adversity on self-regulation potentially sets children on developmental trajectories toward non-optimal outcomes. However, research has also shown us that children's regulatory abilities are relatively malleable to environmental changes, implying that contextual influences have the potential to reverse poverty's negative influences on self-regulation (Blair & Raver, 2012; Raver, 2012).

Positive Parenting: A Crucial Protective Influence

Decades of parenting literature suggests that children who are exposed to high levels of nurturance combined with moderate-to-high levels of control appropriate to their developmental stage are likely to develop into competent individuals (Baumrind et al., 2010; Maccoby & Martin, 1983). Importantly, having a warm and supportive parent has consistently been demonstrated to promote adaptive development, and protect children from negative outcomes, in the context of

adversity (Masten, 2015). In fact, reviews of the resilience literature have shown responsive and supportive parenting to be the single most robust predictor of resilient outcomes in the context of a broad range of environmental adversities (Luthar et al., 2015).

With regard to socioeconomic adversities specifically, research has shown that positive parenting behaviors are linked to positive child behavior and adolescent positive adaptation well into young adulthood, despite exposure to economic pressures (Jeon & Neppl, 2016; Neppl et al., 2015). Similarly, in testing the Family Stress Model (FSM; Conger et al., 2010) within a resilience framework with the same sample, researchers Jeon and Neppl (2019) found that in spite of economic hardship, mothers' positive parenting as measured by responsiveness, communication, and positive mood, was linked to child social competence. Warm and nurturing parenting has been shown to reduce the physiological wear and tear caused by low SES in children (E. Chen et al., 2011; Evans et al., 2007). Additionally, warm and competent parenting has been found to moderate the effects of SES, family poverty, and neighborhood disadvantage on young children's emotional and behavioral functioning (Burchinal et al., 1996; Dearing, 2004; Kim-Cohen et al., 2004; Malmberg & Flouri, 2011). Positive parenting practices such as non-harsh discipline and positive reinforcement, and consistency and warmth, have been found to buffer children in the context of poverty, predicting emotional competence (Stack et al., 2010), school achievement (Kiernan & Mensah, 2011), and decreased problem behavior (Galambos et al., 2003).

Research additionally suggests that supportive parenting prevents risky behavior such as alcohol and nicotine use in adolescents exposed to family economic pressure (Kwon & Wickrama, 2014), and that positive parenting practices buffer adolescents from externalizing concerns in the context of a variety of environmental stressors, including poverty (Brumley & Jaffee, 2016). The body of extant literature reviewed provides strong evidence for both the promotive and protective effects of positive parenting in the context of youth exposed to adversity. From a public health perspective, positive parenting is a crucial modifiable resilience factor that can be leveraged as a point of intervention for vulnerable families (Traub & Boynton-Jarrett, 2017).

It is important to note that positive parenting, as characterized by warm, supportive behaviors as well as consistent discipline and a lack of harshness, has universally been found to support positive youth adaptation across diverse race-ethnic contexts in the U.S. (Bámaca-Colbert et al., 2018; Brody et al., 1999, 2001; Conger et al., 1992; Leidy et al., 2010; Murry et al., 2001; Taylor et al., 2015). However, researchers have increasingly begun to note that parenting

characterized by high warmth coupled with harsher levels of discipline, referred to as “no-nonsense” parenting (Brody & Flor, 1998) may be particularly protective for Black and Hispanic youth (Mahrer et al., 2019; Steele et al., 2005; White et al., 2013). It is therefore important to assess the effects of positive parenting separately for youth from different race-ethnicities, as there may be differential protective processes at play.

The Present Study

Despite the abundance of research assessing the impacts of socioeconomic adversity on child and adolescent functioning, there are a few key gaps in the research that this paper aims to address. Most notably, many studies have conceptualized adolescent adjustment solely as a lack of negative outcomes, or (although less common) as solely the presence of positive outcomes. As resilience and development systems scholars have noted however, positive adolescent adjustment in the context of risk should be conceptualized as both a lack of maladaptive outcomes as well as the presence of thriving outcomes (Lerner et al., 2018; Masten, 2014b). Therefore, it is important for research to assess indicators at both ends of the adjustment spectrum in order to more holistically understand potential mediating and moderating factors influencing the pathways to adolescent adjustment in the context of socioeconomic adversity.

Second, although a number of studies have assessed family processes as mediating mechanisms through which socioeconomic adversity impacts youth functioning, less research has focused on self-regulation as a potential mediator; a factor that is known to be both strongly influenced by contextual risks, as well as integral to youth adjustment. Finally, the literature surrounding adolescent adjustment, particularly with regard to positive thriving outcomes, is heavily skewed in favor of non-Hispanic White samples, despite race-ethnic minority youths’ disproportionate experiences of socioeconomic risk, especially in mother-headed families.

Finally, although parenting has long-since been established as an important protective factor in the context of youth at risk, few studies have assessed its protective effects from early childhood to adolescence. Relatedly, less is understood about whether there are specific developmental periods during which the influence of positive parenting is particularly important (some research has indicated that responsive parenting interventions during infancy and early childhood are particularly protective; Landry et al., 2008), or whether such parenting is consistently protective across childhood development. The current dissertation assesses the

positive parenting at two separate timepoints – when the child is five, and when the child is 9 – to determine the developmental periods during which positive parenting is most likely to buffer youth from the cascading negative effects of socioeconomic adversity. These timepoints specifically were chosen to assess whether positive parenting exerts more of a protective influence for adolescent outcomes if experienced during early childhood or middle childhood.

The present study uniquely assesses associations between early childhood socioeconomic adversity, self-regulation in middle childhood, and positive and negative developmental outcomes in adolescence. Additionally, we examine whether positive parenting attenuates the pathways from socioeconomic adversity to adolescent adjustment through self-regulation. The aims of this paper are as follows (see Figure 3):

Aim 1: To test the indirect effects of socioeconomic adversity (experienced from birth to Year 5, including variables tapping into cumulative, chronic, and early socioeconomic adversity) on adolescent substance use and adolescent wellbeing (at Year 15) through the mediating role of self-regulation (at Year 9), separately for non-Hispanic Black, non-Hispanic White, and Hispanic families.

Hypothesis 1 (Testing paths ‘ab’ and ‘ac’ in Fig. 3). Early childhood socioeconomic adversity will be negatively associated with self-regulation in middle childhood, which will in turn be negatively associated with adolescent substance use, and positively associated with adolescent wellbeing, across all race-ethnic groups. There will be indirect effects of cumulative socioeconomic adversity on adolescent adjustment outcomes through self-regulation. Additionally, chronic socioeconomic adversity will have a greater negative association with self-regulation and adolescent adjustment outcomes than transient socioeconomic adversity. No specific hypothesis is made regarding the timing of socioeconomic adversity and youth outcomes.

Aim 2: To test whether positive parenting at Year 5 moderates the association between socioeconomic adversity (from birth to Year 5) and self-regulation (at Year 9).

Hypothesis 2 (Testing path ‘d’). Positive parenting will moderate the pathway from socioeconomic adversity to self-regulation, such that for children who experience higher levels of positive parenting at Year 5, the association between early socioeconomic adversity and self-regulation at Year 9 will be weaker, across all race-ethnic groups.

Aim 3: To test whether positive parenting at Year 9 moderates the association from self-regulation (at Year 9) to adolescent substance use and adolescent wellbeing (at Year 15).

Hypothesis 3 (Testing paths ‘e’ and ‘f’). Positive parenting will moderate the pathway from self-regulation to adolescent substance use and wellbeing, such that for children who experience higher levels of positive parenting at Year 9, the associations between self-regulation and adolescent substance use and adolescent wellbeing will be weaker, across all race-ethnic groups.

METHOD

Participants and Procedures

Data for this study were drawn from the Fragile Families and Child Wellbeing Study (FFCWS), a longitudinal study following 4898 children born in 20 large U.S. cities between 1998 and 2000. The study was designed to oversample for unmarried births, with a smaller sample of married births for comparison. At baseline, interviews were conducted with recent mothers in the maternity wards of 75 hospitals within the 20 U.S. cities included in the study. Mothers were considered ineligible if they were minors in hospitals that did not permit inclusion of minors in the study, and if they were placing their baby for adoption or if they reported that the child’s father was deceased. Eligible mothers were asked to identify the father of the child, and fathers were interviewed in person during hospital visits or by telephone. Nearly all the baseline interviews with the mother took place in person, and over three-quarters of the father interviews were in person. All survey materials, including brochures, consent forms, screening instruments, and questionnaires, were available in both English and Spanish during all waves of data collection.

Currently, the FFCWS sample includes six waves of data collected at the focal child’s birth, and at ages 1, 3, 5, 9, and 15 (hereafter, these timepoints of data collection are referred to as ‘Years’). The core study consists of questionnaires administered to the biological mothers and fathers. From Year 3 onwards, an in-home study component was included, which included a Primary Caregiver (PCG) interview, interviewer observations and assessments, and activity workbooks. Interviewer observations and assessments were conducted by trained bilingual interviewers. At Years 9 and 15, questionnaires were also administered to the children. The full sample is 52% male, and ethnically diverse (48% Black, 27% Hispanic, 21% White, and 4% other) at baseline.

In the present study, data collected at all six waves of the study (i.e., at birth and Years 1, 3, 5, 9, and 15) were used. Since we conducted multi-group analyses to understand the impacts of

socioeconomic adversity on positive parenting separately for the three major race-ethnic groups represented in the FFCWS, mothers classified as “other” ($n = 194$), or as “missing” ($n = 11$) race-ethnicity based on mothers’ reports of race-ethnicity at baseline were excluded from analyses. Therefore, after missing cases on all key variables were dropped (excluded $n = 207$), the final analytic sample ($N = 4,485$) included only non-Hispanic Black ($N = 2,229$), Hispanic ($N = 1,267$), and non-Hispanic White ($N = 989$) families.

Seventy-nine percent of the mothers in the overall sample were not married to the father of the focal child at the time of the birth, and 38% were cohabiting with the father at the time of the birth. The mean age of mothers at baseline was 25.28 ($SD = 6.04$), and 55% of the focal children in the sample were male. At baseline, 40% of mothers had not completed high school, and the average family income was \$31,994. Descriptive statistics specific to our analytic sample are included in Table 7 (key variables in the study), and in Appendix B, Table B. 1. (study covariates).

Measures

Socioeconomic Adversity

A comprehensive index of socioeconomic adversity was created (see Analytic Strategy in Chapter 2, Paper 1) using a mix of self-reported and constructed measures of household income, maternal education, marital status, material hardship, and healthcare insurance, reported at Years 1, 3, and 5. Using this index, three variables were constructed to capture i) cumulative, ii) chronic vs. transient, and iii) early vs. late socioeconomic adversity during the early childhood period. The measure for each socioeconomic adversity indicator is described here, and descriptive statistics for each of these indicator variables is provided in Appendix A, Table A.2. (a) and (b). Note that the indicator measures were constructed such that higher scores reflect greater adversity.

Household Income. Household income was measured by maternal self-report at Year 1, 3, and 5 surveys. To correct for skewness in the raw household income variables, we created an ordinal variable of household income brackets based on US Census data. See Appendix A, Table A.1. for a full list of the income categories, which range from ‘\$200,000 and over’ to ‘under \$5,000’ in decreasing order. The variable was treated as continuous for the purposes of our analyses.

Maternal Education. Mother’s education was measured by maternal self-report at Year 1, 3, and 5 surveys. The ordered categories of education included: less than high school, high-school

or equivalent, some college or technical school, and college or graduate school. These categories were reverse-coded for analyses such that less than high-school education was the highest score (to reflect higher adversity), and college/graduate school was the lowest score.

Marital Status. Mothers' self-report of their marital status was assessed at Years 1, 3, and 5. A categorical variable was constructed that assessed whether the mother was: 1) married to the child's father, 2) cohabiting with the child's father, 3) married to a partner other than the father, and 4) cohabiting with a partner other than the father (all response options were "Yes"/ "No") to create a single dichotomous variable assessing marital status as married (= 0) vs. single/cohabiting (= 1) at each time point. Based on literature indicating that cohabiting-mother families often share similar socioeconomic risk profiles to single-mother families (e.g., Livingston, 2018; Manning, 2015; Percheski, 2018), and that children of single or cohabiting mothers differ more from children of married mothers than from each other particularly with regard to socioemotional outcomes (S. L. Brown, 2004), cohabiting and single mothers were collapsed into one group within each race-ethnic sample for this paper.

Material Hardship. Material hardship was measured at Years 1, 3, and 5 using six questions assessing participants' economic hardship. Mothers responded using "yes/no" to whether hardships such as not being able to pay bills on time, loss of utilities, and going hungry, had occurred within the past 12 months (e.g., "Was there any time in the past 12 months when (you/your household) did not pay the full amount of the rent or mortgage?") The variable was dichotomized to indicate the presence of *any* material hardships (0 = none, 1 = one or more hardships) given problems with skew, following prior studies using FFCWS data (Zilanawala & Pilkauskas, 2012).

Healthcare Insurance. Healthcare access and insurance was measured at Years 1, 3, and 5 using mothers' yes/no responses to the questions "Are you or your child(ren) (who live with you) currently covered by Medicaid (CA: Medi-Cal) or by another public, federal or state assistance program which pays for medical care or do you belong to a Medicaid HMO?" and "Are you or your child(ren) currently covered by a private health insurance plan?". A single dichotomous variable assessing access to healthcare insurance was created (0 = private healthcare insurance, 1 = publicly funded or no healthcare insurance) following Anand and colleagues' (2019) finding that publicly funded or no healthcare insurance is an indicator of socioeconomic adversity.

Positive Parenting

Positive parenting was measured using 11 interviewer-reported items from the 55-item version of the Home Observation for the Measurement of the Environment (HOME) inventory (Caldwell & Bradley, 2003) which assess aspects of the environment in which a child is reared. The HOME inventory is completed by trained observers during home visits, using “yes/no” response options to a series of questions that are designed to assess parental warmth and hostility, and is well validated across diverse populations (Caldwell & Bradley, 2003). The HOME has versions that are validated for early childhood, middle childhood, and early adolescence, and the FFCWS derived items from all three versions of the scale to tap into developmentally appropriate parenting at Years 5 and 9, (see Appendix B, Table B.3 for a full list of items). Items were consistent across the two timepoints, with the exception of one item “Parent spontaneously praises child’s behavior or qualities during visit”, which was only present at Year 5. After harsh parenting items were reverse-coded, items were averaged to create composites of positive parenting at Years 5 and 9. Total possible scores range from 0–1 at Years 5 and 9. Cronbach’s $\alpha = 0.79$ at Year 5 and 0.70 at Year 9.

Child Self-Regulation

Self-regulation was assessed at Year 9 using the self-control subscale of the teacher-reported Social Skills Rating System (Gresham & Elliott, 1990). This is a 10-item scale tapping into children’s inhibitory behavior, or their ability to manage their behavior and emotions in a variety of challenging and regular situations. Example items included “child controls temper in conflict with peers”, “child receives criticism well”, and “child compromises in conflict by changing own ideas”. Response options range on a scale from 0 = never to 3 = always, with higher scores indicating greater self-regulation abilities. Total scores were computed by taking the mean of all 10 items in the scale, and Cronbach’s α for this scale was 0.95.

Adolescent Substance Use

To assess overall substance use at Year 15, we first created three variables assessing adolescents’ alcohol, tobacco, and marijuana use using self-reported items within the FFCWS. Specifically, we created substance ‘uptake’ or continuum variables based on similar measures in

past research (Marceau et al., 2020, 2021) to assess the severity and frequency of adolescents' substance use in the past month. Frequencies of adolescent substance use uptake scores for each substance, and across all race-ethnicities, are presented in Table 8.

Alcohol Use. To create the alcohol use continuum, we used the items “Have you ever drank alcohol more than two times without parents?” (0 = No; 1 = Yes), “How often did you drink alcohol in the past month?” (1 = Never to 5 = Every day or nearly every day), and “How many alcoholic drinks did you have each time in the past month?” (range = 1–30). Our final alcohol uptake variable ranges from 0 = never drank to 4 = drank 5+ drinks in the past month.

Tobacco Use. To create the tobacco uptake variable, we used the items “Have you ever smoked an entire cigarette?” (0 = No; 1 = Yes), “How often did you smoke cigarettes in the past month?” (1 = Never to 5 = three-to-five days a week) and “How many cigarettes per day did you smoke in the past month?” (1 = five or fewer to 4 = more than a pack a day). Our final uptake variable ranged from 0 = Never smoked to 4 = smoked almost every day the past month.

Marijuana Use. To create the tobacco uptake variable, we used the items “Have you ever tried marijuana?” (0 = No; 1 = Yes), “How often did you use marijuana in the past year?” (1 = Never to 5 = three or more days a week) and “How often did you use marijuana in the past month?” (1 = never to 4 = three or more days a week). Our final marijuana uptake variable ranged from 0 = never tried marijuana to 4 = used marijuana 3+ days a week in the past month.

See Table 8 for frequencies of each score category across all three substance use uptake variables, and see Appendix B, Tables B.4–B.6 for correlations among substance use variables for each race-ethnic sample. Finally, we fit these three variables to a single latent variable to assess overall adolescent substance use at Year 15. All indicators loaded significantly onto the substance use latent variable for each race-ethnic sample, and all factor loadings were above 0.4. See Figures 4–6 to see factor loadings within each race-ethnic sample.

Adolescent Wellbeing

Adolescent wellbeing at Year 15 was assessed using youth self-reported subscales of optimism, connectedness, and happiness from the EPOCH Measure of Adolescent Wellbeing (Kern et al., 2016). Kern and colleagues defined these dimensions as: hopefulness and confidence about the future and a tendency to take a favorable view of things (optimism); the sense that one has satisfying relationships with others and believes that one is cared for, loved, esteemed, and

valued (connectedness); and the presence of positive emotions and mood and a general feeling of being content with one's life (happiness). Each subscale consists of four items, and example items included: "I am optimistic about my future." (optimism); "There are people in my life who really care about me" (connectedness); and "I am a cheerful person" (happiness). Response options ranged from 0 = "Strongly Agree" to 3 = "Strongly Disagree"; items were reverse-coded, and each subscale score was computed using a mean score of the respective items. Therefore, final subscale scores had a range of 0 to 3 (Cronbach's α for optimism, connectedness, and happiness subscales were .60, .74, and .61 respectively), with higher scores indicating greater optimism, connectedness, and happiness. See Table 7 for descriptive data on each of these variables, and Appendix B; Tables B.4–B.6 to see correlations among the variables across each race-ethnic sample. A latent variable with these three wellbeing variables as indicators was created to assess overall adolescent wellbeing. All indicators loaded significantly onto the adolescent wellbeing latent variable for each race-ethnicity, and all factor loadings were above 0.4. See Figures 4–6 to see factor loadings within each race-ethnic sample.

Covariates

Included covariates were based on past literature demonstrating their influence on the socioeconomic outcomes of families (Kalil & Ryan, 2010; Zilanawala & Pilkauskas, 2012). Covariates were measured at baseline unless otherwise noted, and included the focal child's sex, mother's age, the number of the mother's biological children, mother's age at her first birth, whether mothers were born in the U.S., whether the mother's baseline interview was conducted in Spanish, and whether the mother met criteria for depression or anxiety (at Year 1) based on the standardized Composite International Diagnostic Interview – Short Form (Kessler et al., 1998). We also included two dichotomous variables assessing whether mothers obtained treatment for substance use and whether their use of substances interfered with their daily life at Year 1, to control for potential genetic influences on adolescents' substance use development. Descriptive statistics for the covariates within each race-ethnic sample are included in Appendix B, Table B.1.

Analytic Strategy

Data Preparation

Prior to formal hypothesis testing, the distribution of data was examined for scale, shape, and outliers for each variable. Scatterplots were used to confirm that socioeconomic adversity and both youth outcomes (adolescent substance use and adolescent wellbeing) were linearly (as opposed to non-linearly) associated. Additionally, bivariate correlations were analyzed to ensure associations were in the expected directions and to examine associations between the covariates (i.e., child sex, mothers' age, mothers' number of biological children, maternal age at first birth, immigration status, whether the mother meets criteria for depression or anxiety, and mothers' substance use at Year 1) and the key variables of interest (i.e., socioeconomic adversity, positive parenting, adolescent substance use, and adolescent wellbeing). Based on correlations, only covariates significantly correlated with the key variables within each race-ethnicity were included in the a priori model to ensure parsimony.

Hypothesis Testing

Model building. We fit a series of Structural Equation Models (SEM; see Figure 3) in Mplus version 8.4 (Muthén & Muthén, 1998-2017). Baseline models included one of the three socioeconomic adversity variables and one parenting variable, and all covariates were regressed on the three child outcomes: self-regulation, wellbeing, and substance use. Based on findings from the baseline models, we pared down non-significant covariate effects that could be removed without worsening model fit to ensure parsimony. We also examined modification indices and incorporated changes that were theoretically appropriate and that would improve model fit (i.e., direct effects from socioeconomic adversity to adolescent outcomes, concurrent associations of positive parenting and self-regulation). Then we tested two models, first with positive parenting at Year 5 as a moderator of the path from early childhood socioeconomic adversity to self-regulation at Year 9 (1st stage moderated mediation; *path a* in Figure 3), and in a second model, positive parenting at Year 9 as a moderator of the paths from self-regulation to adolescent substance use and adolescent wellbeing (*paths b and c*; 2nd stage moderated mediation). In the case of a poorly fitting model, we ran a series of models incorporating first the main effects, and then one interaction term at a time to identify problematic parts of the model.

It should be noted that model fit statistics and modification indices were checked using models without Monte Carlo integration as Mplus does not provide full model fit information when numerical integration is employed. Model fit statistics from those models (without Monte Carlo integration) are presented in Table B.7 in Appendix B; parameter estimates did not differ across these and the final models (with Monte Carlo integration). Separate models were run to test this hypothesis within non-Hispanic Black, Hispanic, and non-Hispanic White families.

Hypothesis 1. Hypothesis 1 was that early childhood socioeconomic adversity would indirectly affect adolescent adjustment outcomes (both substance use and wellbeing) through self-regulation such that increased socioeconomic adversity would lead to a decrease in self-regulation in middle childhood, which would in turn be associated with a) an increase in adolescent substance and b) a decrease in adolescent wellbeing. Within the best-fitting models, this hypothesis was tested using the Model Indirect command in Mplus. Bootstrapping was used to account for non-normality in data distributions, and Monte Carlo integration to account for missing data on the mediator variable.

Hypotheses 2 and 3. Hypotheses two and three were that the pathways from early childhood socioeconomic adversity to adolescent adjustment through self-regulation would be weaker for youth whose mothers exhibit higher levels of positive parenting. Within the best-fitting models, moderated mediation was formally testing using the Model Constraints command in Mplus to obtain bootstrapped confidence intervals (CIs) of the *indices of moderated mediation* (Hayes, 2015; Hayes & Rockwood, 2020) for each model. The index of moderated mediation is calculated as the product of *paths* $d \times b$ and $d \times c$ in Fig. 3 for 1st stage moderated mediation, and product of *paths* $a \times e$ and $a \times f$ in Fig. 3 for 2nd stage moderated mediation. If bootstrapped CIs for these parameters did not include 0, we concluded that there was formal evidence of moderated mediation. To further probe these moderation effects, we then examined the conditional effects of the indirect paths at -1SD (low), average (medium), and +1SD (high) levels of the moderator using the Model Constraint command. Again, bootstrapped CIs of these conditional indirect effects were used to assess the strength of effects at different levels of the moderator (Preacher et al., 2007). It should be noted that even in the absence of formal evidence of moderated mediation, conditional indirect effects can be probed to obtain useful information regarding how the moderator may influence mediated pathways (Hayes, 2015). Separate models were run for non-Hispanic Black, Hispanic, and non-Hispanic White families, and missing data was accommodated using FIML.

Power Analysis

A Monte Carlo simulation study in Mplus was used to determine the power to detect hypothesized effects in the FFCWS data. Simulations included 28-30% missing for self-regulation, positive parenting, and adolescent substance use and wellbeing variables based on study attrition statistics. Previous literature showed effects of .17 for associations of socioeconomic adversity and positive parenting (Jeon & Neppl, 2016) and .16 to .18 for socioeconomic status and self-regulation (Lawson et al., 2018). For associations between self-regulation and adolescent adjustment, a recent meta-analysis showed effects of .26 to .30 and .09 to .25 for indicators of youth wellbeing and substance use respectively (Robson et al., 2020). To be conservative, moderate effects were used (.15) for the effects of cumulative socioeconomic adversity, socioeconomic adversity chronicity, and socioeconomic adversity timing on self-regulation, adolescent substance use, and wellbeing, as well as the interaction of socioeconomic adversity*positive parenting on self-regulation, and the interaction of positive parenting*self-regulation on adolescent substance use and wellbeing. The study is well powered to detect medium size (i.e., .15) main effects of cumulative socioeconomic adversity on positive parenting, self-regulation, and substance use and adolescent wellbeing (e.g., power = .96 - .98), as well as interaction effects of socioeconomic adversity and positive parenting on self-regulation (power = .98), and of self-regulation and positive parenting on adolescent outcomes (power > .97). It is additionally well-powered to detect medium size indirect effects from cumulative socioeconomic adversity to adolescent outcomes through self-regulation (power = .82). However, the study is underpowered to detect small effects (e.g., .05, power = .26 - .30 for main and interaction effects, and < .20 for indirect effects).

RESULTS

Figures 4–6 summarize key findings from all analytic models within each race-ethnic sample separately and show path estimates that survive Bonferroni corrections for multiple testing (adjusted $p = 0.003$). Standardized estimates of direct effects from all models are presented in Tables 9–11 for each race-ethnic sample, and standardized estimates of indirect effects for all race-ethnic samples are presented in Table 12. Additionally, Tables B.6 and B.7 in Appendix B provide model fit information and R^2 for all the models tested within each race-ethnic sample. Key model results are summarized in this section according to our hypotheses, for each race-ethnic sample.

Standardized estimates are denoted by ' β ' while unstandardized estimates (for the tests of conditional indirect effects) are denoted by 'b' in text.

Non-Hispanic Black Families

Indirect Effects

Adolescent Wellbeing. Self-regulation was not associated with adolescent wellbeing for non-Hispanic Black youth, nor were any of the socioeconomic adversity predictors directly associated with adolescent wellbeing. Therefore, there were no indirect effects from socioeconomic adversity to adolescent wellbeing within this sample.

Adolescent Substance Use. Results for non-Hispanic Black youth indicated that cumulative socioeconomic adversity from birth to age five was associated with lower self-regulation in middle childhood ($\beta = -.14, p < .001$), which in turn predicted higher levels of adolescents' substance use as measured by alcohol, smoking, and marijuana uptake at Year 15 ($\beta = -.19, p < .001$). Additionally, there was an indirect effect from cumulative socioeconomic adversity to adolescent substance use through self-regulation at Year 9 ($\beta = .03, p = .004, 95\% \text{ CI } [.01, .05]$). The absence of the direct path from socioeconomic adversity to adolescent substance use suggest that the effect was fully mediated through self-regulation.

This pattern of results held true for chronic and early socioeconomic adversity as well. Chronic ($\beta = -.10, p < .001$) and early socioeconomic adversity ($\beta = -.10, p = .002$) negatively predicted child self-regulation at Year 9, which in turn was associated with increased adolescent substance use ($\beta = -.19, p < .001$) at Year 15. Additionally, there were indirect effects from both chronic and early socioeconomic adversity to adolescent substance use through self-regulation ($\beta = .02, p = .01, 95\% \text{ CI } [.01, .04]$).

Therefore, our first hypothesis was partially supported for non-Hispanic Black families: cumulative, chronic, and early socioeconomic adversity in early childhood indirectly predicted higher adolescent substance use through the lowered self-regulation in middle childhood.

Moderating Effects of Positive Parenting

Positive Parenting at Year 5. Our formal test of moderated mediation indicated that positive parenting at Year 5 did not moderate the indirect effects of cumulative socioeconomic adversity on adolescent substance use or wellbeing. Additionally, tests of conditional indirect effects showed that the effects from cumulative socioeconomic adversity to adolescent substance use through self-regulation were similar in magnitude at all levels of Year 5 positive parenting.

However, despite the lack of evidence to support formal moderated mediation, tests of conditional indirect effects revealed that the effects of *chronic* socioeconomic adversity on adolescent substance use were stronger at low and average levels of Year 5 positive parenting ($b = .011, p = .03, 95\% \text{ CI } [.003, .022]$; $b = .007, p = .02, 95\% \text{ CI } [.002, .014]$ respectively) than at high levels of positive parenting ($b = .003, p = .421, 95\% \text{ CI } [-.004, .01]$). Similarly, the indirect effects from *early* socioeconomic adversity to adolescent substance use through self-regulation were stronger at low and average levels of Year 5 positive parenting ($b = .012, p = .03, 95\% \text{ CI } [.004, .024]$; $b = .007, p = .03, 95\% \text{ CI } [.002, .013]$ respectively) than at high levels of positive parenting ($b = .001, p = .77, 95\% \text{ CI } [-.006, .008]$).

Positive Parenting at Year 9. Formal tests of moderated mediation indicated that Year 9 positive parenting did not moderate the indirect effects from socioeconomic adversity to adolescent substance use or wellbeing for non-Hispanic Black youth. However, tests of conditional indirect effects showed that the indirect pathway from *cumulative* socioeconomic adversity to substance use was stronger at low and medium levels of positive parenting ($b = .006, p = .026, 95\% \text{ CI } [.002, .013]$; $b = .005, p = .006, 95\% \text{ CI } [.002, .01]$ respectively) than at high levels of positive parenting ($b = .004, p = .157, 95\% \text{ CI } [.00, .011]$).

Therefore, our second and third hypotheses were partially supported within non-Hispanic Black youth. Although there was no evidence of formal moderated mediation, tests of conditional indirect effects showed stronger indirect effects of socioeconomic adversity on adolescent substance use at low and average levels of positive parenting. There was no evidence of moderated mediation with regard to adolescent wellbeing within this sample.

Hispanic Families

Indirect Effects

In Hispanic families, our first hypothesis regarding indirect effects from socioeconomic adversity to adolescent substance use and wellbeing through the mediating mechanism of self-regulation was not supported. Cumulative socioeconomic adversity during the birth-to-5-year period was not associated with self-regulation at Year 9, nor was self-regulation associated with either of the adolescent outcomes. In models 2 (*chronic* socioeconomic adversity) and 3 (*early* socioeconomic adversity), socioeconomic adversity was negatively associated with Year 9 self-regulation ($\beta_{chronic} = -.09, p = .038$; $\beta_{early} = -.10, p = .027$), but again self-regulation was not associated with either adolescent outcome.

Moderating Effects of Positive Parenting

Our second and third hypotheses were similarly not supported among Hispanic youth. Although positive parenting at Year 5 predicted higher levels of self-regulation at Year 9 in all three socioeconomic adversity models ($\beta_{cumulative} = .19, p < .001$; $\beta_{chronic} = .26, p < .001$; $\beta_{early} = .25, p < .001$), neither Year 5 nor Year 9 positive parenting moderated pathways *a*, *c*, or *d* in Figure 3. Since there were no indirect pathways from socioeconomic adversity to adolescent adjustment outcomes, our hypotheses regarding conditional indirect effects at different levels of positive parenting were also not supported in the Hispanic sample.

Non-Hispanic White Families

Indirect Effects

Adolescent Wellbeing. In the non-Hispanic White sample, we found that *cumulative*, *chronic*, and *early* socioeconomic adversity were all negatively associated with children's self-regulation at Year 9 ($\beta_{cumulative} = .31, p < .001$; $\beta_{chronic} = .23, p < .001$; $\beta_{early} = .24, p < .001$). Additionally, self-regulation at Year 9 was positively associated with adolescent wellbeing at Year 15 ($\beta = -.16, p = .006$) and the indirect paths from cumulative ($\beta = -.05, p = .02, 95\% \text{ CI } [-.10, -.02]$) as well as chronic and early ($\beta = -.04, p = .03, 95\% \text{ CI } [-.08, -.01]$) socioeconomic adversity

to adolescent wellbeing through self-regulation were supported. As there were no direct effects from socioeconomic adversity to adolescent wellbeing, the effect was fully mediated through self-regulation at Year 9.

Adolescent Substance Use. Self-regulation was not associated with substance use in any of the socioeconomic adversity models for non-Hispanic White families. Therefore, our first hypothesis was only partially supported within this sample since there were no indirect effects from socioeconomic adversity to adolescent substance use. However, *chronic* socioeconomic adversity experienced during the birth-to-5-year period directly predicted higher levels of adolescent substance use ($\beta = .12, p = .025$).

Moderating Effects of Positive Parenting

Positive Parenting at Year 5. Tests of moderated mediation and conditional indirect effects revealed that Year 5 positive parenting did not moderate the effects of socioeconomic adversity on adolescent adjustment for non-Hispanic White youth.

Positive Parenting at Year 9. There was no formal evidence to suggest that Year 9 positive parenting moderated the pathways from socioeconomic adversity to adolescent adjustment in this sample. However, tests of conditional indirect revealed that the negative indirect effect from *cumulative* socioeconomic adversity to adolescent wellbeing was stronger at low and average levels of Year 9 positive parenting ($\beta = -.025, p = .066, 95\% \text{ CI } [-.06, -.002]$; $\beta = -.019, p = .023, 95\% \text{ CI } [-.04, -.006]$ respectively) than at high levels of positive parenting ($\beta = -.012, p = .213, 95\% \text{ CI } [-.03, .005]$) as per bootstrapped CIs. This pattern held true for *chronic* and *early* socioeconomic adversity as well, with stronger negative indirect effects of socioeconomic adversity on adolescent wellbeing at low and average levels of Year 9 positive parenting ($\beta = -.04, p = .07, 95\% \text{ CI } [-.09, -.003]$; $\beta = -.029, p = .03, 95\% \text{ CI } [-.06, -.009]$) than at high levels of positive parenting ($\beta = -.019, p = .215, 95\% \text{ CI } [-.05, .008]$). Positive parenting at Year 9 did not moderate effects from socioeconomic adversity to adolescent substance use.

DISCUSSION

This paper assessed the longitudinal impact of early childhood socioeconomic adversity on adolescent wellbeing and substance use in separate samples of non-Hispanic Black, Hispanic, and

non-Hispanic White families. Specifically, our aims were to test i) the mediating role of self-regulation in the association between socioeconomic adversity and adolescent adjustment and ii) whether positive parenting at either Years 5 or 9 moderated the indirect pathways from socioeconomic adversity to adolescent adjustment through self-regulation (see Figure 3). Results are discussed separately under each aim, and findings for each race-ethnic sample are situated within the broader literature relevant to that population. That is, given variations in the construct of socioeconomic adversity within each race-ethnic group, differential findings are not compared across groups but rather described separately within each group.

Socioeconomic Adversity, Self-Regulation, and Youth Adjustment

Within each race-ethnic sample in this study, all three measures of socioeconomic adversity during the birth-to-five-year period were associated with lower levels of self-regulation at age nine. This is consistent with an extensive body of literature cross-cutting diverse race-ethnic populations that indicates that self-regulation and related neurocognitive processes are particularly impaired in the context of poverty and its correlated risks (Blair & Raver, 2016; Johnson et al., 2016; Lipina & Evers, 2017; McFadyen-Ketchum et al., 2016; Palacios-Barrios & Hanson, 2019; Raver, 2012; Roy et al., 2014; Yu et al., 2020). Importantly, our findings add to existing evidence underscoring that it is not only the accumulation of socioeconomic risks across time, but also experiences of *early* (during the birth-3-year period) as well as *chronic* (across more than one time point) socioeconomic adversity adversely that adversely affect the development of self-regulation in youth (Evans & English, 2002; Evans & Kim, 2013; P. Kim et al., 2018; Lawson et al., 2018).

Non-Hispanic Black Youth

With regard to self-regulation and youth adjustment, we found that among non-Hispanic Black youth, self-regulation longitudinally predicted lower levels of substance use across time, consistent with extant research within this population (Griffin et al., 2015). Additionally, within this sample, socioeconomic adversity experienced during early childhood indirectly predicted higher levels of adolescent substance use at Year 15 through lowered self-regulation at Year 9. However, socioeconomic adversity did not affect adolescent wellbeing either directly or indirectly. This suggests that for Black youth, self-regulation may play a pivotal role in influencing *risky*

outcomes in adolescents exposed to adversity but may not be as salient for predicting thriving in this context. Since positive wellbeing outcomes are much less well-explored among Black youth, it is difficult to pinpoint the reason for this finding. One potential explanation is that, as researchers have pointed to the importance of family, peer, and neighborhood connectedness in predicting positive outcomes in Black youth (Rose et al., 2017), it could be that contextual assets matter more for thriving outcomes within this sample than internal resources.

Another possible explanation for this finding is the hypothesis that self-regulation may act as a double-edged sword for Black youth due to the John Henryism phenomenon (James et al., 1987). Specifically, researchers have found that although greater self-control is associated with the attainment of normative adaptive outcomes such as less drug use, better academic achievement, and higher earning capacity among Black youth, it is also predictive of poorer stress physiology, worsened cardiometabolic health, and higher odds of depression and compromised self-esteem in Black youth over time (Bernard et al., 2020; Brody et al., 2016). According to the John Henryism theory and corroborated by extant research, this is because the persistent self-control that is required for Black youth to overcome the disproportionate barriers they face, in order to attain favorable outcomes, may be damaging to maintain in the long run, and therefore could increase the risk of poor psychological wellbeing over time (Brody et al., 2013, 2016). Although self-regulation was not associated with adolescent wellbeing in our sample of Black youth, the direction of effects between these constructs were negative, contradictory to our expectations and in line with the John Henryism hypothesis (see Table 3). This coupled with our finding that greater self-regulation is associated with less substance use in Black youth could point to evidence of the John Henryism phenomenon within Black youth in the FFCWS. It would be premature to make such a conclusion based on our results and until these findings are replicated within this sample, but it offers an interesting avenue for future research since this hypothesis is yet to be tested with flourishing outcomes.

Hispanic Youth

Among Hispanic youth, contradictory to our expectations, self-regulation at Year nine was not associated with either substance use or wellbeing at Year 15. Much of the literature examining regulatory abilities among Hispanic youth has focused on the preschool and early childhood population and links to academic outcomes; therefore, less is known about self-regulation in

middle childhood and its longitudinal effects on adolescent outcomes within this population. However, researchers have found that for older Latinx youth, effortful control in particular is longitudinally associated with fewer internalizing and externalizing concerns, increased active coping behaviors, and decreased aggression, substance use, and likelihood to be a part of deviant peer groups (Atherton et al., 2017, 2020; Clark et al., 2015; Taylor, Jones, et al., 2018; Taylor, Widaman, et al., 2018). Since self-regulation is a multi-dimensional construct that is operationalized and measured in many ways (Nigg, 2017) it could be that certain aspects of self-regulation (i.e., attentional, activation, and inhibitory control) are more relevant in determining adjustment outcomes within Hispanic youth than the emotional and behavioral self-control abilities as measured in our study. There is extensive research indicating that different measures of self-regulation matter for different domains of youth functioning (King et al., 2013; Sturge-Apple et al., 2017; Wills et al., 2016), and that the measure of self-regulation may be a key factor in predicting differential youth outcomes across immigrant and non-immigrant Hispanic youth (McFadyen-Ketchum et al., 2016). Therefore, it could be that immigration status, and other measures of self-regulation such as heightened stress physiology, influence the extent to which self-regulation longitudinally predicts adolescent adjustment in Hispanic youth. Finally, it is also likely that our results are simply due to other mediating mechanisms not assessed in our study that better explain the impacts of socioeconomic adversity on adolescent adjustment within Hispanic youth; for example, coping strategies, parenting, or neighborhood conditions.

Non-Hispanic White Youth

Within non-Hispanic White adolescents, we found that self-regulation at age nine predicted higher levels of wellbeing at Year 15. This finding is in line with research indicating that different components of self-regulation have important implications for youth positive functioning, and not just youth maladjustment. Specifically, researchers have found that higher levels of intentional self-regulation are predictive of global positive youth development as measured by competence, confidence, and connection (Bowers et al., 2011; Mueller et al., 2011), as well as of hope for the future (Schmid et al., 2011) across time. Similarly, behavioral and emotional self-control have been shown to have positive direct effects on youth wellbeing as measured by happiness, energy, and friendliness (Wills et al., 2016). It should be noted that although a considerable amount of self-regulation research has focused on the developmental

importance of down-regulating negative emotions, more recent work has demonstrated that the ability to up-regulate *positive* emotions may also play a particularly salient role in facilitating wellbeing (Kashdan & Rottenberg, 2010; Morrish et al., 2018; Quoidbach, Mikolajczak, & Gross, 2015). Since the measure of self-regulation used in this study includes items that tap into both the downregulation of negative affect such as temper and physical aggression, as well as the up-regulation of positive behaviors such as cooperation and acceptance (see Appendix A; Table A.3), our findings corroborate the hypothesis that these regulatory processes together may be notable predictors of thriving among non-Hispanic White youth. The finding that self-regulation mediated associations between socioeconomic adversity and adolescent thriving in this sample is consistent with prior literature pointing to regulatory mechanisms as one of the key pathways through which early childhood adversity affects later adjustment (Blair & Raver, 2016). However, prior work has mainly focused on markers of maladjustment in youth, and our study adds to the literature by underscoring the indirect negative influence of socioeconomic adversity on youth *flourishing* through self-regulation.

Although researchers have found that a wide range of self-regulatory processes, including behavioral control, emotion regulation, attentional control, and effortful control, influence the development of externalizing pathways to substance use in White youth (Eisenberg et al., 2010; Robson et al., 2020; Wilcox et al., 2016), we did not find evidence to support this among non-Hispanic White adolescents in the FFCWS. However, since our study used measures of tobacco, alcohol, and marijuana use *uptake* to assess substance use in 15-year-olds, it could be that our model obscures pathways from self-regulation to other aspects of substance use such as initiation, problematic use, number of substances used, etc. Additionally, there is evidence indicating that regulatory abilities may be differentially predictive for different types of substances (Piehler et al., 2012). Since we collapsed alcohol, tobacco, and marijuana use into one latent measure to allow for adolescent wellbeing and substance use to be modeled together, we were not able to test the distinct pathways from self-regulation to the different types of substance use separately. However, this is less likely since our models fit well without modification indices pointing to associations between self-regulation and specific substance use outcomes. Finally, since conceptualizations and the measurement of self-regulation continue to be debated (Nigg, 2017) there is lack of clear consensus regarding which components of regulation are most salient for thriving versus maladjustment outcomes. Researchers have found that among White youth, intentional self-

regulation may matter more for adaptive rather than problematic development outcomes (Bowers et al., 2011), and that impulsivity and behavioral self-control may play more important roles in the development of substance use behaviors (Farley & Kim-Spoon, 2017). Therefore, it could be that our measure of self-regulation did not tap into the aspects of regulatory behavior that are salient for substance use development in White youth.

Protective Effects of Positive Parenting

Although we did not find evidence to support formal moderation of indirect effects in any of the race-ethnic samples, our findings do suggest that for non-Hispanic Black youth and non-Hispanic White youth, the effects of early childhood socioeconomic adversity on adolescent adjustment may be weaker at high levels of positive parenting. Additionally, our findings point to potential differences in the protective effects of positive parenting at different developmental timepoints (i.e., at Year 5 vs. Year 9) and for different dimensions of socioeconomic adversity (i.e., cumulative, chronic, and early).

Specifically, we found that for non-Hispanic Black youth, positive parenting during early childhood (Year 5) may weaken the effects of *chronic* and *early* socioeconomic adversity on adolescent adjustment. That is, at high levels of positive parenting at Year 5, the indirect effects from chronic and early socioeconomic adversity to adolescent substance use appeared to be weaker than at low and average levels of Year 5 positive parenting. On the other hand, in the context of *cumulative* socioeconomic adversity, later positive parenting (at Year 9) attenuated these indirect effects for Black youth. These findings point to important distinctions in the influence that positive parenting may have on youth at different developmental timepoints. In general, researchers have stressed the importance of warm and nurturing parenting during infancy and early childhood in buffering the effects of adverse environments on youth (Luby, 2020). However, there is recent evidence to support a neural developmental timing hypothesis suggesting that early childhood parenting is a salient predictor of socioemotional outcomes, while parenting during adolescence may matter more for youth's prefrontal cortex functioning (Gard et al., 2021; Hyde et al., 2020). Additionally, research on sensitive periods of development have found that early parenting is especially salient for determining HPA axis functioning for youth (Hackman et al., 2018), and that chronic stress experienced during the infancy years is also particularly detrimental for regulatory mechanisms (Blair & Raver, 2016; Brandes-Aitken et al., 2019). Therefore, it could be that for the

non-Hispanic Black youth in our sample, for whom experiences *chronic* and *early* socioeconomic adversity are particularly detrimental on later outcomes, early childhood positive parenting plays an important role in facilitating healthy self-regulation despite exposure to these risks, thereby weakening their long-term indirect impacts on adolescent substance use.

Another explanation is that within Black families, chronic and early socioeconomic adversity may exert more immediate negative impacts on youth, and are therefore more susceptible to earlier buffering factors, while the impacts of cumulative socioeconomic adversity are better attenuated by protective factors later on in the developmental timeline. Further research is needed to unpack the nuances of why positive parenting at different developmental times has differential protective effects for Black youth in the context of socioeconomic risks. However overall, these findings are consistent with the broader literature pointing to the protective effects of warm and nurturing parenting in the context of socioeconomic risks in Black families (Coates et al., 2019).

Among Hispanic families, although mothers' positive parenting when the child was 5 predicted higher levels of self-regulation at age nine, these parenting behaviors did not moderate pathways from socioeconomic adversity to self-regulation. The finding that warm and supportive parenting promotes adaptive regulatory behavior within this sample echoes existing literature (Bámaca-Colbert et al., 2018; Leidy et al., 2010; Taylor et al., 2015). However, researchers have increasingly pointed to different parenting practices, characterized by high warmth but higher levels of discipline, that may be more protective Hispanic youth than the traditional notions of positive parenting as assessed in our study (Mahrer et al., 2019; White et al., 2013). For Hispanic youth therefore, warm parenting behaviors may play a promotive rather than protective role in the context of adversity, and future research should assess the role of more "no-nonsense" parenting in buffering adolescents from socioeconomic risks.

Consistent with literature regarding the buffering effects of positive parenting for White youth (Brumley & Jaffee, 2016; E. Chen et al., 2011; DeVore & Ginsburg, 2005; Jeon & Neppl, 2019), our findings indicate that mothers' positive parenting at Year 9 weakens the long-term negative indirect effects of early childhood socioeconomic adversity on adolescent wellbeing for non-Hispanic White youth in the FFCWS. Specifically, in this sample, positive parenting during middle childhood seemed to be a more salient protective factor in the context of socioeconomic adversity than positive parenting at Year 5.

There is an extensive body of work pointing to the protective effects of positive parenting in the context of adversity. Our study makes a valuable contribution to this literature by examining positive parenting as an overarching protective factor that buffers adolescents from the *longitudinal indirect* effects of early childhood socioeconomic adversity on later adjustment; and simultaneously testing whether these protective effects differ according to the *developmental timing* of parenting and the *dimension* of socioeconomic adversity (i.e., cumulative, chronic, and early). It should be noted that since we did not find evidence to formally confirm moderated mediation in our study, our findings regarding the buffering effects of positive parenting should be interpreted with caution and replicated before being generalized to broader populations. However, our tests of conditional effects nevertheless provide useful information regarding potential *attenuations* of the detrimental impacts of socioeconomic adversity given high levels of positive parenting.

Conclusions

With this study, our aim was to examine the longitudinal impacts of early childhood socioeconomic adversity on adolescent adjustment through the mediating role of self-regulation, and to test whether positive parenting at two different developmental time-points buffered these indirect pathways. Our findings, separately examined and discussed within each race-ethnic sample, contribute to our understanding of one potential mechanism through which socioeconomic adversity may exert its influence on both adolescent adjustment and flourishing outcomes. Additionally, it offers insights into the potential protective effects of positive parenting for youth in this context. This section presents the strengths and limitations of the study as well as implications and future directions.

Limitations and Future Directions

Our findings should be interpreted in the context of several study limitations. First, it is crucial to note that positive parenting was measured using interviewer's observations of mothers' warm and responsive parenting behaviors during in-home assessments when the child was 5 and 9. Although it is a strength of the study that it included multiple reporters, these observations of parenting may not accurately reflect mothers' stable parenting behaviors since they were assessed

at a single time-point. Our findings should be replicated with other measures of parenting such as parent self-report and child-reports of parenting behaviors. Second, to allow for correlations between adolescent substance use and adolescent wellbeing in our hypothesis tests, we fit three different types of substance use to a single latent variable and similarly, three different dimensions of flourishing into one latent variable. Although this ensured model parsimony and allowed us to reduce the number of tests that were run, it is likely to have obscured unique pathways from socioeconomic adversity to specific types of substance use, and to specific aspects of wellbeing. To better understand nuances in adolescent adjustment in the context of socioeconomic adversity, research is needed that tests these pathways separately. Third, there is literature pointing to sex differences in self-regulation and adolescent adjustment (Daneri et al., 2018; Daundasekara et al., 2020; Kuhn, 2015), as well as to the bidirectional effects between parenting and child outcomes (Barbot et al., 2014; Pearl et al., 2014). Although it was outside the scope of our study to test these effects, our findings should not be interpreted without considering their potential influence on our model results. Similarly, it is well-known that poverty exhibits its influence on youth through other mediators that were not the focus of our study, such as parenting stress and quality, neighborhood mechanisms, and biological pathways such as malnutrition, inflammation, and neuroendocrine responses to stress (Jensen et al., 2017). We recognize these other pathways contribute meaningfully to the effects of socioeconomic adversity on youth functioning and that not accounting for them is likely to have influenced our results. Along with research testing selective pathways to youth functioning as ours has, future research should also aim to disentangle the various mechanisms through which poverty and its correlated risks may impact youth functioning.

Strengths and Implications

Despite the noted limitations, our study makes an important contribution to the literature assessing the impact of socioeconomic adversity on adolescent adjustment. First, our research questions are consistent with developmental systems and resilience theories in that they take into account multiple interacting contexts and ask questions regarding both *how* (assessing self-regulation as a mediator) and *when* (testing positive parenting as a moderator) socioeconomic adversity exerts its influence on youth functioning across time (Lerner, 2012; Masten & Barnes, 2018; Palacios-Barrios & Hanson, 2019). Additionally, by focusing on the *timing* of exposure to adversity as well as positive parenting within a longitudinal framework, our findings offer a

developmentally nuanced understanding of how socioeconomic adversity influences adolescent outcomes, and when youth are likely to benefit the most from the protective effects of warm parenting. This is especially crucial for informing policy and programming efforts aimed at improving outcomes for youth in poverty, since less is known regarding the developmental time periods in which to target parenting practices (Luby, 2020). Third, as mentioned above, our analyses included multiple reporters including mothers' reports of socioeconomic adversity indicators, teacher reports of child self-regulation, observer reports of positive parenting, and adolescents' self-reports of substance use and wellbeing. This lends robustness to our results by eliminating reporter bias. Finally, although strength-based research in Black and Hispanic youth is on the rise, studies within these populations still tend to be predominantly risk and deficit focused. Our study contributes to the existing literature by describing resilience processes *within* each of these race-ethnic groups using salient markers of positive youth functioning and measures of individual strengths and contextual assets that may facilitate increased youth wellbeing across time.

Table 7. Descriptive Data of Key Study Variables in Paper 2

	Non-Hispanic Black (N = 2,229)		Hispanic (N = 1,267)		Non-Hispanic White (N = 989)	
	Mean	SD	Mean	SD	Mean	SD
Socioeconomic Adversity (Y0-5)						
Cumulative	10.54	2.79	11.07	2.74	7.05	2.9
Chronicity	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
<i>Transient/low</i>	887	39.79	510	40.25	593	59.96
<i>Chronic</i>	1342	60.21	757	59.75	396	40.04
Timing						
<i>Late</i>	860	38.58	497	39.23	579	58.54
<i>Early</i>	1369	61.42	770	60.77	410	41.46
Positive Parenting						
Year 5	0.78	0.22	0.84	0.19	0.86	0.17
Year 9	0.77	0.18	0.75	0.19	0.82	0.16
Child Self-Regulation (Y9)	1.75	0.74	2.04	0.67	2.08	0.66
Adolescent Substance Use (Y15)						
Tobacco Use	0.07	0.43	0.1	0.47	0.13	0.51
Alcohol Use	0.19	0.52	0.31	0.72	0.31	0.75
Marijuana Use	0.41	0.89	0.4	0.91	0.27	0.69
Adolescent Wellbeing (Y15)						
Optimism	2.47	0.49	2.37	0.5	2.31	0.51
Connectedness	2.76	0.37	2.78	0.36	2.8	0.35
Happiness	2.6	0.48	2.56	0.52	2.56	0.52

Note. See Table B.1 in Appendix B for descriptive data of covariates.

Table 8. Frequencies of Adolescent Substance Use Uptake Scores by Race-Ethnicity

Score	Tobacco			Alcohol			Marijuana		
	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic	White
0	1646 (74%)	775 (61%)	677 (69%)	1462 (66%)	655 (52%)	594 (60%)	1299 (58%)	642 (51%)	607 (61%)
1	25 (1%)	37 (3%)	50 (5%)	183 (8%)	119 (9%)	97 (10%)	249 (11%)	108 (9%)	95 (10%)
2	6 (0.3%)	1 (0.1%)	0 (0%)	40 (2%)	36 (3%)	32 (3%)	59 (3%)	28 (2%)	22 (2%)
3	19 (0.9%)	13 (1%)	14 (1%)	15 (0.7%)	7 (0.6%)	5 (0.5%)	49 (2%)	22 (2%)	11 (1%)
4	6 (0.3%)	2 (0.2%)	2 (0.2%)	2 (0.1%)	11 (0.9%)	14 (1.42%)	44 (2%)	25 (2%)	8 (0.8%)

Note. See Table B.2 in Appendix B for definitions of scores for each substance. Tobacco use indicates smoking at least one whole cigarette; alcohol use refers to drinking alcohol more than two times without parents.

Table 9. Paper 2 Standardized Direct Effects: non-Hispanic Black Youth

Model	Outcome	Predictor	(1) Cumulative SA		(2) Chronic SA		(3) Early SA	
			Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>
(a) Positive Parenting (Y5) as moderator	Self-Regulation	Soc. Adversity	-0.154	<.0001	-0.097	0.002	-0.094	0.003
		Positive Parenting Y5	0.031	0.318	0.071	0.32	0.035	0.635
		SA×PP (Y5)	0.027	0.316	0.098	0.148	0.138	0.046
	Wellbeing	Soc. Adversity	-0.004	0.907	-0.033	0.261	-0.038	0.209
		Self-Regulation (Y9)	-0.006	0.87	-0.005	0.882	-0.005	0.892
	Substance Use	Soc. Adversity	0.034	0.35	0.041	0.204	0.036	0.257
		Self-Regulation Y9	-0.179	<.0001	-0.182	<.0001	-0.183	<.0001
	Self-Regulation	Soc. Adversity	-0.158	<.0001	-0.11	<.0001	-0.103	<.0001
(b) Positive Parenting (Y9) as moderator	Wellbeing	Soc. Adversity	0	0.996	-0.036	0.235	-0.04	0.189
		Positive Parenting Y9	0.02	0.632	-0.01	0.754	-0.01	0.746
		Self-Regulation Y9	-0.006	0.862	-0.01	0.78	-0.009	0.803
		SR×PP (Y9)	-0.046	0.347	0.019	0.627	0.02	0.623
	Substance Use	Soc. Adversity	0.03	0.397	0.037	0.24	0.033	0.303
		Positive Parenting Y9	-0.023	0.625	-0.055	0.1	-0.054	0.112
		Self-Regulation Y9	-0.176	<.0001	-0.175	<.0001	-0.176	<.0001
		SR×PP (Y9)	0.033	0.655	-0.01	0.845	-0.011	0.838

Note. N = 2,229. Std. Est. = Standardized Estimate; SA = Socioeconomic Adversity; SR = Self-Regulation; PP = Positive Parenting. Self-regulation assessed at Year 9, wellbeing and substance use assessed at Year 15. Only hypothesized pathways are presented. Estimates where $p < .05$ are bolded.

Table 10. Paper 2 Standardized Direct Effects: Hispanic Youth

			(1) Cumulative SA		(2) Chronic SA		(3) Early SA	
Model	Outcome	Predictor	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>
(a) Positive Parenting (Y5) as moderator	Self-Regulation	Soc. Adversity	-0.056	0.23	-0.078	0.082	-0.087	0.054
		Positive Parenting Y5	0.192	<.0001	0.259	<.0001	0.251	<.0001
		SA×PP (Y5)	-0.058	0.19	-0.082	0.181	-0.069	0.269
	Wellbeing	Soc. Adversity	0.015	0.722	0.014	0.747	0.001	0.639
		Self-Regulation Y9	0.041	0.418	0.043	0.401	0.041	0.892
	Substance Use	Soc. Adversity	0.054	0.243	0.046	0.284	0.035	0.981
		Self-Regulation Y9	-0.026	0.651	-0.027	0.649	-0.027	0.423
	Self-Regulation	Soc. Adversity	-0.08	0.083	-0.11	0.038	-0.099	0.028
(b) Positive Parenting (Y9) as moderator	Wellbeing	Soc. Adversity	-0.02	0.631	-0.013	0.755	-0.024	0.571
		Positive Parenting Y9	0.021	0.653	0.022	0.632	0.022	0.631
		Self-Regulation Y9	0.071	0.188	0.07	0.192	0.068	0.204
		SR×PP (Y9)	-0.046	0.646	0.025	0.651	0.025	0.652
	Substance Use	Soc. Adversity	0.078	0.097	0.067	0.127	0.055	0.201
		Positive Parenting (Y9)	0.032	0.472	0.03	0.488	0.029	0.503
		Self-Regulation (Y9)	-0.097	0.128	-0.096	0.132	-0.097	0.128
		SR×PP (Y9)	-0.103	0.06	-0.103	0.061	-0.104	0.057

Note. $N = 1,267$. Std. Est. = Standardized Estimate; SA = Socioeconomic Adversity; SR = Self-Regulation; PP = Positive Parenting. Self-regulation assessed at Year 9, wellbeing and substance use assessed at Year 15. Only hypothesized pathways are presented. Estimates where $p < .05$ are bolded.

Table 11. Paper 2 Standardized Direct Effects: non-Hispanic White Youth

			(1) Cumulative SA		(2) Chronic SA		(3) Early SA	
Model	Outcome	Predictor	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>
(a) Positive Parenting (Y5) as moderator	Self-Regulation	Soc. Adversity	-0.312	<.0001	-0.233	<.0001	-0.239	<.0001
		Positive Parenting Y5	0.018	0.706	-0.013	0.844	-0.009	0.891
		SA*PP (Y5)	0.083	0.075	0.075	0.254	0.069	0.296
	Wellbeing	Soc. Adversity	-0.07	0.225	-0.015	0.805	-0.013	0.828
		Self-Regulation Y9	0.156	0.006	0.16	0.006	0.16	0.006
	Substance Use	Soc. Adversity	0.015	0.829	0.123	0.047	0.104	0.084
		Self-Regulation Y9	-0.007	0.906	0.008	0.887	0.005	0.926
	Self-Regulation	Soc. Adversity	-0.306	<.0001	-0.232	<.0001	-0.237	<.0001
(b) Positive Parenting (Y9) as moderator	Wellbeing	Soc. Adversity	-0.065	0.263	-0.012	0.837	-0.011	0.844
		Positive Parenting Y9	0.002	0.964	0.003	0.947	0.003	0.945
		Self-Regulation Y9	0.159	0.005	0.163	0.005	0.161	0.005
		SR*PP (Y9)	-0.054	0.418	-0.055	0.413	-0.055	0.416
	Substance Use	Soc. Adversity	0.023	0.742	0.127	0.041	0.106	0.079
		Positive Parenting Y9	0.027	0.574	0.02	0.666	0.021	0.654
		Self-Regulation Y9	-0.008	0.886	0.008	0.896	0.005	0.937
		SR*PP (Y9)	-0.075	0.187	-0.08	0.149	-0.078	0.161

Note. N = 989. Std. Est. = Standardized Estimate; SA = Socioeconomic Adversity; SR = Self-Regulation; PP = Positive Parenting. Self-regulation assessed at Year 9, wellbeing and substance use assessed at Year 15. Only hypothesized pathways are presented. Estimates where $p < .05$ are bolded.

Table 12. Paper 2 Standardized Indirect Effects Across all Race-Ethnic Samples

		(1) Cumulative SA		(2) Chronic SA		(3) Early SA	
Model	Outcome	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>	Std. Est.	<i>p-value</i>
BLACK FAMILIES (<i>N</i> = 2,229)							
(a) Positive	Wellbeing	0.001	<i>0.875</i>	0.001	<i>0.89</i>	0	<i>0.9</i>
Parenting (Y5)	Substance Use	0.028	0.002	0.018	0.013	0.017	0.017
(b) Positive	Wellbeing	0.001	<i>0.867</i>	-0.036	<i>0.235</i>	0.001	<i>0.816</i>
Parenting (Y9)	Substance Use	0.009	0.002	0.019	0.008	0.018	0.012
HISPANIC FAMILIES (<i>N</i> = 1,267)							
(a) Positive	Wellbeing	-0.002	<i>0.591</i>	-0.003	<i>0.488</i>	-0.004	<i>0.495</i>
Parenting (Y5)	Substance Use	0.001	<i>0.755</i>	0.002	<i>0.697</i>	0.002	<i>0.684</i>
(b) Positive	Wellbeing	-0.006	<i>0.35</i>	-0.006	<i>0.293</i>	-0.007	<i>0.298</i>
Parenting (Y9)	Substance Use	0.008	<i>0.305</i>	0.009	<i>0.242</i>	0.01	<i>0.234</i>
WHITE FAMILIES (<i>N</i> = 989)							
(a) Positive	Wellbeing	-0.049	0.025	-0.037	0.031	-0.038	0.03
Parenting (Y5)	Substance Use	0.002	<i>0.911</i>	-0.002	<i>0.894</i>	-0.001	<i>0.93</i>
(b) Positive	Wellbeing	-0.049	0.023	-0.038	0.028	-0.038	0.028
Parenting (Y9)	Substance Use	0.003	<i>0.891</i>	-0.002	<i>0.902</i>	-0.001	<i>0.94</i>

Note. Std. Est. = Standardized Estimate. All indirect pathways are from Socioeconomic Adversity → Self-Regulation → outcome. Self-regulation assessed at Year 9, wellbeing and substance use assessed at Year 15. Only hypothesized pathways are presented. Estimates where $p < .05$ are bolded.

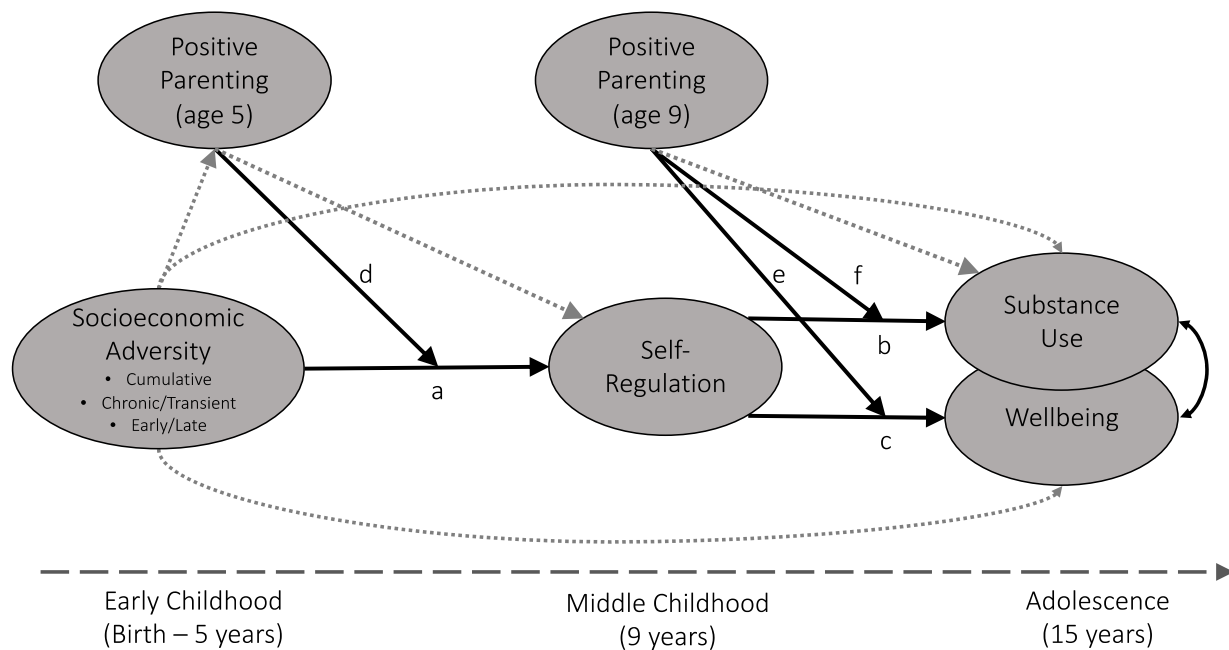


Figure 3. Paper 2 Conceptual Model

Note. Hypothesized paths are in solid black and labeled; dotted grey arrows represent pathways that are established by extant literature, but not the focus of the proposed study aims. Each analytical model included one of three predictors: (1) cumulative, (2) chronic, or (3) early socioeconomic adversity, and one of two possible moderators: (a) positive at Year 5, or (b) positive parenting at Year 9. Covariates were regressed on all three child outcomes: self-regulation, wellbeing, and substance use.

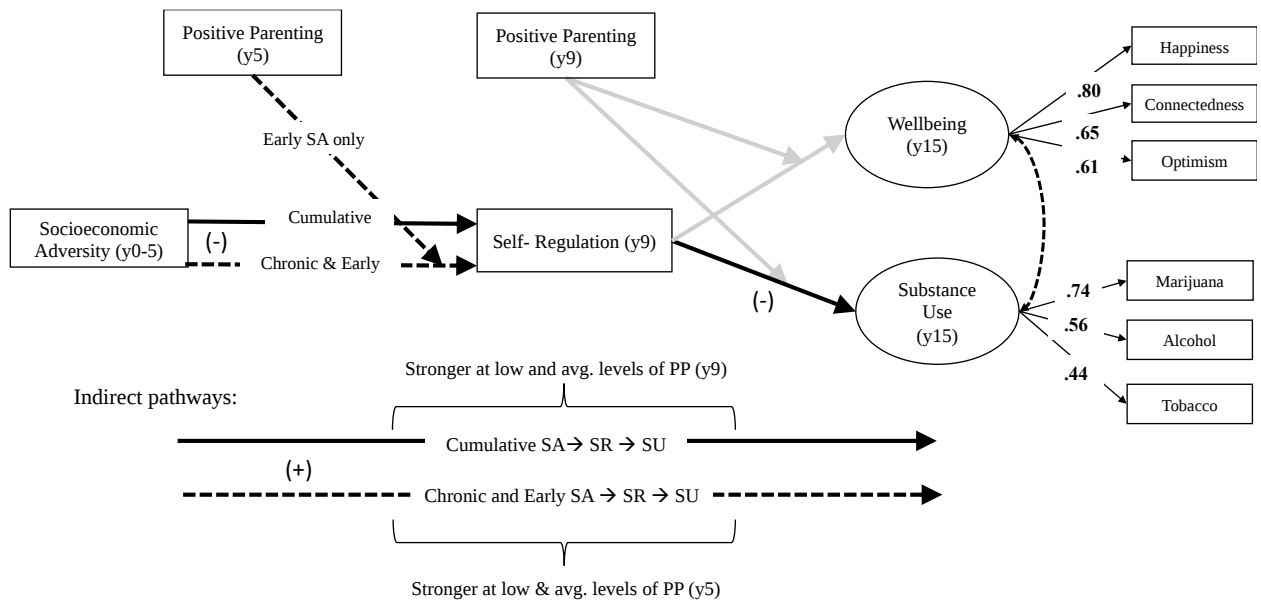


Figure 4. Paper 2 Model Results: Non-Hispanic Black Families

Note. Analytic sample $N = 2,229$. SA= socioeconomic adversity; SR = self-regulation; SU = substance use; PP = positive parenting. Hashed lines denote associations where $p < .05$, bold lines denote associations where $p < .003$ (adjusted for multiple testing). Gray lines represent hypothesized but non-significant paths.

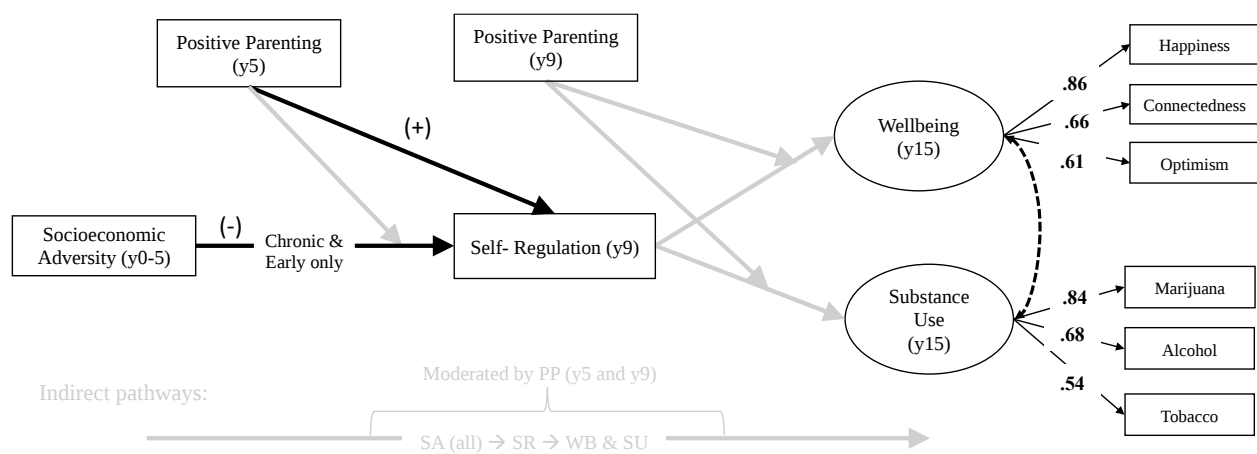


Figure 5. Paper 2 Model Results: Hispanic Families

Note. Analytic sample $N = 1,267$. SA= socioeconomic adversity; SR = self-regulation; SU = substance use; PP = positive parenting. Hashed lines denote associations where $p < .05$, bold lines denote associations where $p < .003$ (adjusted for multiple testing). Gray lines represent hypothesized but non-significant paths.

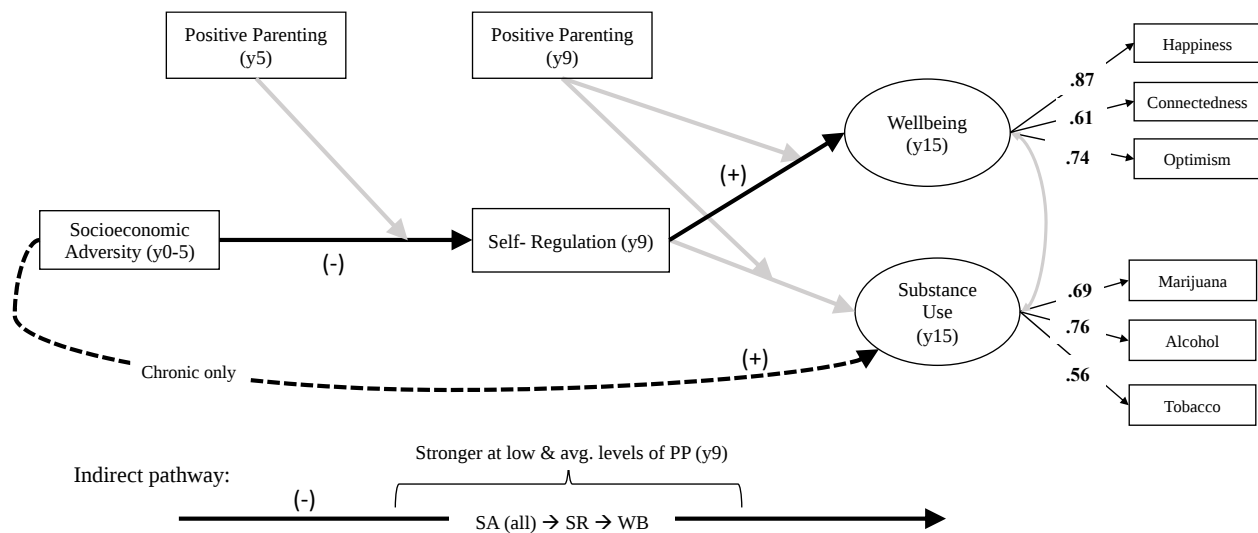


Figure 6. Paper 2 Model Results: non-Hispanic White Families

Note. Analytic sample: $N = 989$. SA= socioeconomic adversity; SR = self-regulation; SU = substance use; PP = positive parenting. Hashed lines denote associations where $p < .05$, bold lines denote associations where $p < .003$ (adjusted for multiple testing). Gray lines represent hypothesized but non-significant paths.

CHAPTER 4. SUMMARY AND CONCLUSIONS

Resilience-based child and family research has increased over the past two decades. However, it remains an understudied area in the context of mother-headed families and race-ethnic minority families experiencing socioeconomic adversity. Given increasing ethnic and family structure diversity in the U.S. (Fry et al., 2018; Horowitz et al., 2019), more research that assesses factors facilitating parent and youth wellbeing in these contexts is clearly warranted.

The two studies in this dissertation use tenets of the Family Stress Model (Conger et al., 2010), developmental systems framework (Ford & Lerner, 1992), and resilience theory (Masten, 2015) to identify protective factors that can be leveraged to facilitate cascading resilience processes in families experiencing socioeconomic adversity. The conceptual model in Chapter 1 (Figure 1) outlines the broad aims of the two papers and how they fit into one overarching model of resilience processes in such families. Specifically, Paper 1 examines social capital as a protective factor for *mothers* in order to facilitate positive parenting behaviors despite exposure to risk, and Paper 2 examines positive parenting in turn as a protective factor for *adolescents* in order to facilitate youth adjustment in this same context. This chapter offers a brief summary of overarching findings for each race-ethnic sample and concludes with key takeaways from the two papers.

Summary of Key Findings

Among non-Hispanic Black families, evidence from papers 1 and 2 show partial support for the hypothesized pathways in our overarching conceptual model. That is, although early childhood socioeconomic adversity negatively impacted Black mothers' positive parenting across time, social participation was found to weaken these effects and allow mothers to engage in warm and supportive parenting behaviors despite their exposure to adversity, thereby showing evidence for *parental resilience* in this sample. In turn, although there was no formal evidence of moderated mediation in Paper 2, the indirect effects of socioeconomic adversity on adolescents' substance use through lowered self-regulation were found to be weaker for youth whose mothers exhibited higher levels of positive parenting during the early and middle childhood periods. Therefore, positive parenting in turn facilitated *adolescent resilience* within non-Hispanic Black families, allowing youth to exhibit adaptive outcomes despite their exposure to early childhood adversity.

These findings corroborate existing literature regarding the protective effects of social participation for Black mothers and of positive parenting for Black youth (Ceballo & McLoyd, 2002; Coates et al., 2019; McCloskey & Maguire-Jack, 2021). Papers 1 and 2 extend this literature on non-Hispanic Black families by: i) underscoring the negative impacts of *chronic* and *early* socioeconomic adversity on parenting and adolescent outcomes, and ii) highlighting the potential protective effects of early childhood parenting in this context. In addition, self-regulation was identified as a key mechanism in the pathway from socioeconomic adversity to adolescent maladjustment, but not wellbeing, for Black youth.

Among Hispanic families in the FFCWS, our hypotheses (as indicated by the dissertation's conceptual model) were largely not supported. Contrary to our expectations, socioeconomic adversity was not associated with either mothers' positive parenting or adolescents' adjustment. Additionally, neither social capital nor positive parenting moderated the effects of socioeconomic adversity on parent or youth outcomes respectively. However, we did find evidence of promotive factors for both Hispanic mothers as well as youth in the context of socioeconomic adversity. Specifically, neighborhood cohesion was found to predict higher levels of positive parenting in Hispanic mothers in Paper 1, and mothers' positive parenting in turn predicted higher levels of child self-regulation across time in Paper 2. These findings stress the importance of neighborhood factors for determining parenting outcomes in Hispanic families and corroborate research suggesting that warm parenting plays an important role in Hispanic youth's wellbeing (Ma & Klein, 2018; Nair et al., 2020). However, more research that incorporates culturally specific risk and protective factors when assessing the impacts of socioeconomic adversity on Hispanic families may be needed to deepen our understanding of resilience processes within this population. Alternatively, it could be that other important mediating pathways and protective factors that were not tested in our studies (e.g., parental distress, neighborhood quality, or school and peer-related factors) are more salient predictors of parent and youth adjustment in the context of socioeconomic adversity for Hispanic families.

Among non-Hispanic White families, results from papers 1 and 2 partially support the hypothesized pathways in our overarching conceptual model. That is, cumulative early childhood socioeconomic adversity negatively impacted White mothers' positive parenting across time, but only for mothers who reported low levels of perceived neighborhood control. That is, perceptions of higher neighborhood control were found to weaken the effects of socioeconomic adversity and

allow mothers to engage in warm and supportive parenting behaviors despite their exposure to risk. In turn, although there was no formal evidence of moderated mediation in Paper 2, the indirect effects of socioeconomic adversity on White adolescents' wellbeing through lowered self-regulation were found to be weaker for youth whose mothers exhibited higher levels of positive parenting during middle childhood. Therefore, our findings show evidence of both *parental resilience* as well as *adolescent resilience* within non-Hispanic White families, indicating that neighborhood control and positive parenting may be particularly salient protective factors for White mothers and youth experiencing socioeconomic adversity respectively. These findings are in line with existing research (Barnhart & Maguire-Jack, 2016; Jeon & Neppl, 2019; B. Kim & Maguire-Jack, 2015), and extend current evidence by identifying self-regulation as key mechanism influencing White adolescents' *positive functioning* in the context of socioeconomic adversity. They further underscore the importance of positive parenting in *middle childhood* rather than early childhood in protecting youth from the detrimental impacts of early childhood adversity.

Conclusions

The developmental consequences of socioeconomic adversity, a multidimensional construct incorporating multiple co-occurring risks, are driven by a complex constellation of interacting risk and protective factors. Informed by extensive literature (reviewed in chapter 1) this dissertation examines a few key individual, familial, and contextual factors (i.e., child self-regulation, positive parenting, and social capital) that influence the ways in which socioeconomic adversity may impact parent and youth functioning across time. Specifically, it takes a resilience-based approach in assessing social capital and positive parenting as potential buffering mechanisms that may allow parents and youth in turn to function adaptively despite their exposure to risks. This two-generation approach (Chase-Lansdale & Brooks-Gunn, 2014) to assessing adaptive functioning in the context of adversity is especially salient for informing policy and programming efforts aimed at facilitating positive parenting, and in turn, healthy youth functioning, in families facing high levels of contextual risk (Lakind & Atkins, 2018; Masten & Palmer, 2019; Schmit et al., 2014).

Importantly, this dissertation takes a step towards more race-ethnically nuanced explorations of socioeconomic adversity by building a measure that accurately captures the relevant socioeconomic risks experienced *within* non-Hispanic Black, Hispanic, and non-Hispanic

White families in the FFCWS. The two papers in this dissertation additionally utilize multigroup analyses to describe resilience processes in the context of socioeconomic adversity separately within each of these race-ethnic groups. Although findings from these analyses could not be compared across groups due to the measures of socioeconomic adversity that are unique to each group, they nevertheless highlight potentially distinct processes that might be at play within each race-ethnic group.

Finally, by assessing the developmental timing of i) exposure to adversity, and ii) protective parenting, the current dissertation can more specifically inform intervention and prevention efforts for youth experiencing socioeconomic adversity. Specifically, findings from papers 1 and 2 are in line with existing evidence (National Institute for Child Health and Human Development, 2005; Roy & Raver, 2014) in suggesting that poverty-reduction policies and programs should target the birth to 3-year period since it is particularly susceptible to the detrimental effects of socioeconomic adversity. In addition, findings from Paper 2 suggest that programming efforts targeting positive parenting may be particularly effective during the early childhood period for Black families facing chronic or early socioeconomic adversity, and during the middle childhood period for White families facing any form of socioeconomic adversity.

Given the complexity of poverty and its concomitant risks, it is difficult to generalize findings regarding its impact on families without taking into account multiple mechanisms and contexts that are likely to influence its effects. In fact, researchers suggest that it may be important to incorporate multiple risk pathways in a single model to better assess the relative contributions of each risk mechanism in the context of socioeconomic adversity (Jensen et al., 2017). By taking a theoretically informed approach to addressing several of the gaps and recommendations of current research outlined in Chapter 1, the findings from this dissertation nevertheless contribute to the existing socioeconomic adversity literature in two key ways. First, by providing useful information regarding holistic and race-ethnic-specific ways to conceptualize and measure socioeconomic adversity in future research; and second, by taking a small step towards understanding *how* and *when* socioeconomic adversity may impact parents and youth within non-Hispanic Black, Hispanic, and non-Hispanic White families, which is crucial for informing prevention and intervention programs and policies aimed at improving wellbeing for families within this context.

APPENDIX A: PAPER 1 SUPPLEMENTAL TABLES & FIGURES

Table A.1. Socioeconomic Adversity Indicator Variables

Variable	Variable Type	Range/response options
Household income	Ordinal (treated as continuous)	1 (Over \$200,000) 2 (\$150,000-\$199,999) 3 (\$100,000-\$149,999) 4 (\$75,000-\$99,999) 5 (\$50,000-\$74,999) 6 (\$35,000-\$49,999) 7 (\$25,000-\$34,999) 8 (\$15,000-\$24,999) 9 (\$5,000-\$14,999) 10 (Under \$5,000)
Maternal Education	Ordinal	0 (college or graduate school), 1 (some college or technical degree), 2 (high school or equivalent), 3 (less than high school)
Marital Status	Binary	0 (married), 1 (single/cohabiting)
Material Hardship	Binary	0 (No hardships experienced), 1 (One or more hardships experienced)
Healthcare Insurance	Binary	0 (Mom, child, or both covered by private insurance), 1 (Neither mom or child covered, or either/both covered by public insurance)

Note. Measures constructed such that higher scores indicate higher levels of socioeconomic adversity

Table A.2 (a). Descriptive Data for Income, Marital Status, Material Hardship, and Healthcare Insurance Across all Race/Ethnic Samples

SA Indicator		White Families		Black Families		Hispanic Families	
Annual HH. Income	<i>Mean</i>	<i>SD</i>		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Year 1	5.96	2.11		7.83	1.88	7.77	1.77
Year 3	5.78	2.27		7.68	1.85	7.52	1.81
Year 5	5.64	2.24		7.51	1.93	7.34	1.81
Marital Status (%)	<i>Married</i>	<i>Single/Cohabiting</i>		<i>Married</i>	<i>Single/Cohabiting</i>	<i>Married</i>	<i>Single/Cohabiting</i>
Year 1	50.58	41.17		15.18	73.56	27.99	59.28
Year 3	52.14	37.28		16.55	70.81	30.91	51.65
Year 5	50.97	33.69		18.27	68.57	31.66	49.93
Material Hardship (%)	<i>None</i>	<i>Any (One or more)</i>		<i>None</i>	<i>Any (One or more)</i>	<i>None</i>	<i>Any (One or more)</i>
Year 1	55.53	35.92		43.29	56.71	49.4	50.6
Year 3	52.52	36.89		38.74	61.26	46.33	53.67
Year 5	50.19	34.17		39.04	60.96	47.08	52.92
Healthcare Insurance (%)	<i>Private</i>	<i>Public or none</i>		<i>Private</i>	<i>Public or none</i>	<i>Private</i>	<i>Public or none</i>
Year 1	51.75	39.9		21.37	67.76	21.63	65.72
Year 3	52.23	37.18		22.01	65.13	21.11	61.38
Year 5	50.39	33.88		24.89	61.69	22.75	58.76

Table A.2 (b). *Descriptive Data for Maternal Education Across all Race/Ethnic Samples*

Year	Maternal Education Frequencies (%)			
	<i>College/Grad</i>	<i>Some Coll/Tech</i>	<i>H.S. or equiv.</i>	<i>Less than H.S.</i>
WHITE FAMILIES				
Year 1	27.7	28.41	23.86	15.57
Year 3	28.21	28.21	22.85	13.95
Year 5	28.01	27.4	21.03	11.83
BLACK FAMILIES				
Year 1	5.46	27.43	30.83	25.54
Year 3	5.93	30.83	28.37	22.27
Year 5	6.92	35.04	24.98	19.91
HISPANIC FAMILIES				
Year 1	3.52	19.01	22.75	42.07
Year 3	4.42	19.99	20.81	37.35
Year 5	4.64	22.16	19.39	35.4

Table A.3. Bivariate correlations among key study variables and covariates (Non-Hispanic Black Families; $N = 1,556$).

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(1) Cumulative SA	1.00														
(2) Chronic SA	0.81***	1.00													
(3) Early SA	0.81***	0.97***	1.00												
(4) Positive Parenting	-0.09***	-0.10***	-0.11***	1.00											
(5) N-hood Cohesion	-0.23***	-0.20***	-0.22***	0.04	1.00										
(6) N-hood Control	-0.15***	-0.12***	-0.12***	0.04	0.51***	1.00									
(7) Social Support	-0.28***	-0.23***	-0.24***	0.03	0.20***	0.13***	1.00								
(8) Social Participation	-0.22***	-0.16***	-0.17***	0.07**	0.17***	0.17***	0.11***	1.00							
(9) Mother's Age	-0.29***	-0.21***	-0.22***	0.07***	0.08***	0.08***	-0.05*	0.16***	1.00						
(10) Child Sex (Male)	0.03	0.01	0.01***	-0.03	-0.05*	0.00	0.00	-0.06**	-0.04	1.00					
(11) No. of Bio Kids	0.17***	0.14***	0.14***	0.01	-0.08***	-0.03	-0.20***	0.05**	0.38***	0.03	1.00				
(12) Age at 1 st Birth	-0.37***	-0.29***	-0.29***	0.07***	0.10***	0.04	0.07**	0.08***	0.52***	-0.04	-0.26***	1.00			
(13) Mom US Born	0.11***	0.10***	0.10***	0.04	-0.01	0.05**	0.03	-0.02	-0.12***	-0.02	0.03	-0.17***	1.00		
(14) Mom Anxiety	0.07**	0.04	0.05***	-0.04	-0.05**	-0.06**	-0.14***	0.03	0.00	-0.01	0.05	-0.02	-0.03	1.00	
(15) Mom Depression	0.08***	0.06**	0.08***	-0.01	-0.08***	-0.05*	-0.15***	0.02	-0.01	-0.02	0.04	0.01	-0.02	0.27***	1.00

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. SA=Socioeconomic Adversity; N-hood=Neighborhood. Positive Parenting measured at Year 9. Covariates 11–15 pertain to the mother.

Table A.4. Bivariate correlations among key study variables and covariates (Hispanic Families; $N = 793$).

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
(1) Cumulative SA	1.00														
(2) Chronic SA	0.82***	1.00													
(3) Early SA	0.83***	0.98***	1.00												
(4) Positive Parenting	-0.09**	-0.06*	-0.05	1.00											
(5) N-hood Cohesion	-0.23***	-0.14***	-0.14***	0.10***	1.00										
(6) N-hood Control	-0.22***	-0.13***	-0.15***	0.03	0.42***	1.00									
(7) Soc. Support	-0.33***	-0.26***	-0.25***	0.04	0.18***	0.21***	1.00								
(8) Soc. Participation	-0.22***	-0.20***	-0.19***	0.05	0.12***	0.15***	0.15***	1.00							
(9) Mother's Age	-0.18***	-0.08**	-0.08***	0.04	0.07**	0.02	-0.09**	0.07*	1.00						
(10) Sp. Interview	0.28***	0.25***	0.24**	-0.15***	-0.12***	-0.20***	-0.25***	-0.18***	0.25***	1.00					
(11) No. of Bio Kids	0.13***	0.12***	0.12***	0.00	0.03	0.00	-0.18***	0.09***	0.34***	0.08**	1.00				
(12) Age at 1 st Birth	-0.30***	-0.18***	-0.18***	0.02	0.09**	0.02	0.07*	0.02	0.64***	0.15***	-0.22***	1.00			
(13) Mom US Born	-0.18***	-0.16***	-0.16***	0.12***	0.06*	0.16***	0.17***	0.19***	-0.28***	-0.72***	-0.04	-0.23***	1.00		
(14) Mom Anxiety	0.04	0.05	0.06*	-0.08**	-0.02	0.04	-0.05	-0.02	0.00	0.00	0.06	-0.01	0.04	1.00	
(15) Mom Depression	0.06***	0.07***	0.07***	0.02	-0.12***	-0.09**	-0.14***	-0.01	-0.01	0.01	-0.01	-0.03	0.04	0.32***	1.00

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. SA=Socioeconomic Adversity; N-hood=Neighborhood; Sp. Interview=mom's interview was in Spanish. Positive Parenting measured at Year 9. All covariates (variables 9–15) pertain to the mother.

Table A.5. Bivariate correlations among key study variables and covariates (White Families; $N = 635$).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Cumulative SA	1.00													
2. Chronic SA	0.80***	1.00												
3. Early SA	0.80***	0.97***	1.00											
4. Positive Parenting	-0.13**	-0.08	-0.07	1.00										
5. N-hood. Control	-0.23***	-0.25***	-0.27***	0.02	1.00									
6. N-hood. Cohesion	-0.39***	-0.37***	-0.39***	0.05	0.55***	1.00								
7. Soc. Support	-0.42***	-0.44***	-0.42***	0.07	0.13**	0.27***	1.00							
8. Soc. Participation	-0.32***	-0.27***	-0.29***	0.09*	0.18***	0.22***	0.14***	1.00						
9. Mother's Age	-0.58***	-0.45***	-0.47***	0.10*	0.12**	0.23***	0.22***	0.28***	1.00					
10. No. of bio kids	0.06	0.10*	0.08	-0.04	-0.02	-0.03	-0.15***	0.11**	0.30***	1.00				
11. Age at 1 st Birth	-0.66***	-0.53***	-0.54***	0.15***	0.12**	0.23***	0.30***	0.20**	0.79***	-0.14***	1.00			
12. Mom born in US	0.02	0.03	0.01	0.00	0.02	0.10**	0.05	0.03	-0.06	0.03	-0.08*	1.00		
13. Mom: Anxiety	0.09*	0.09*	0.08*	0.05	-0.06	-0.08*	-0.10**	-0.05	-0.07	0.00	-0.04	0.04	1.00	
14. Mom: Depression	0.15***	0.16***	0.14***	0.02	-0.07	-0.16***	-0.20***	0.02	-0.03	0.03	-0.05	0.03	0.29***	1.00

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. SA=Socioeconomic Adversity; N-hood=Neighborhood. Positive Parenting measured at Year 9. All covariates (variables 9–14) pertain to the mother.

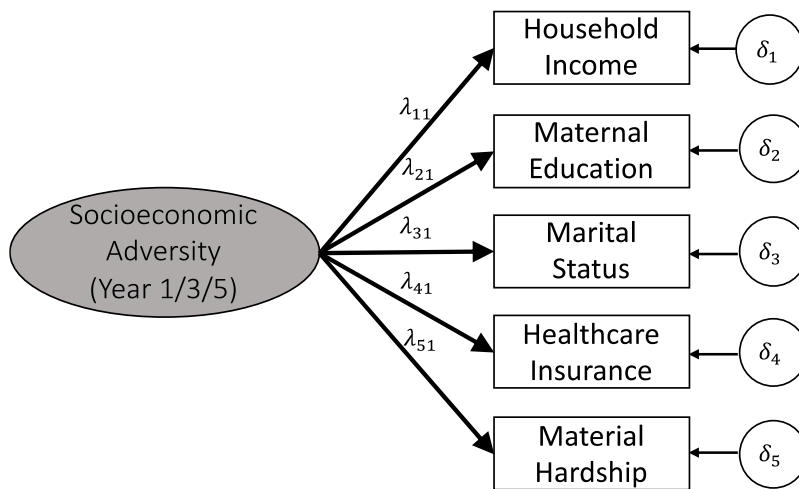


Figure A.1. Baseline Socioeconomic Adversity One-Factor Model with Five Indicators

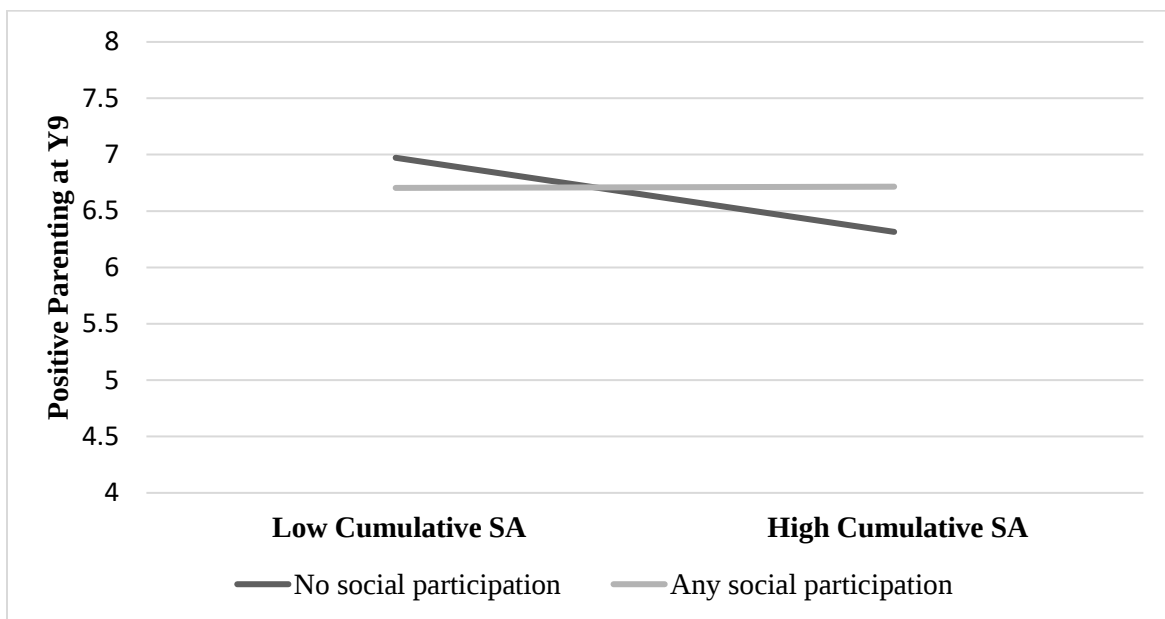


Figure A.2. (a) Interaction between Cumulative Socioeconomic Adversity and Social Participation within Black Families

Note. The association between cumulative socioeconomic adversity and mothers' positive parenting behaviors was significant for mothers who did not participate in social activities ($\beta = -.30$, 95% CI [-0.45, -0.12]) but not for those mothers who participated in one or more social activities ($\beta = 0.00$, 95% CI [-0.12, 0.11])

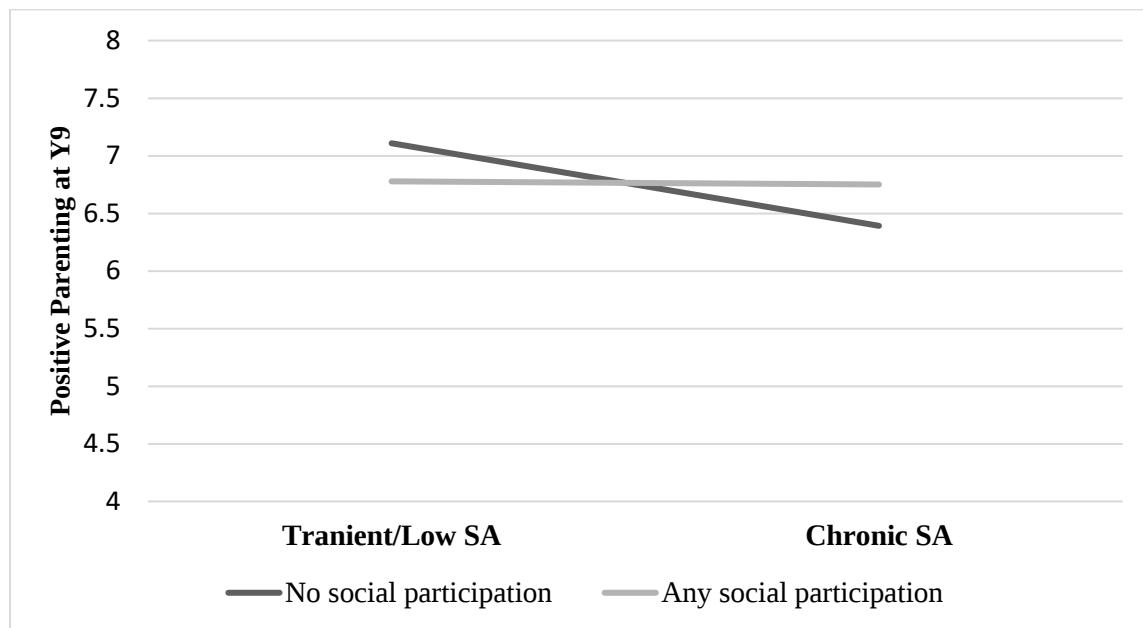


Figure A.2. (b). Interaction between Chronic Socioeconomic Adversity and Social Participation within Black Families

Note. The association between chronic socioeconomic adversity and mothers' positive parenting behaviors was significant for mothers who did *not* participate in any social activities ($\beta = -.72$, 95% CI [-1.00, -0.43]) but not for those mothers who participated in any social activities when the child was 3–5 years old ($\beta = -0.03$, 95% CI [-0.26, 0.22])

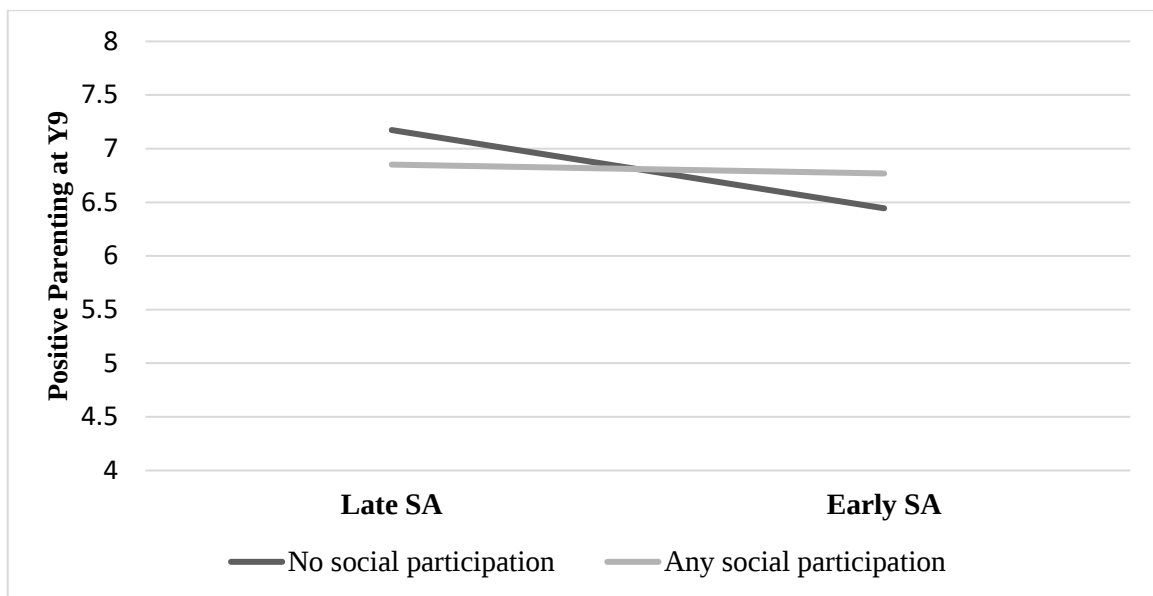


Figure A.2. (c). Interaction between Early Socioeconomic Adversity and Social Participation within Black Families

Note. The association between early socioeconomic adversity and mothers' positive parenting behaviors was significant for mothers who did *not* participate in any social activities ($\beta = -.73$, 95% CI [-1.02, -0.41]) but not for those mothers who participated in one or more social activities ($\beta = -.08$, 95% CI [-0.32, 0.14])

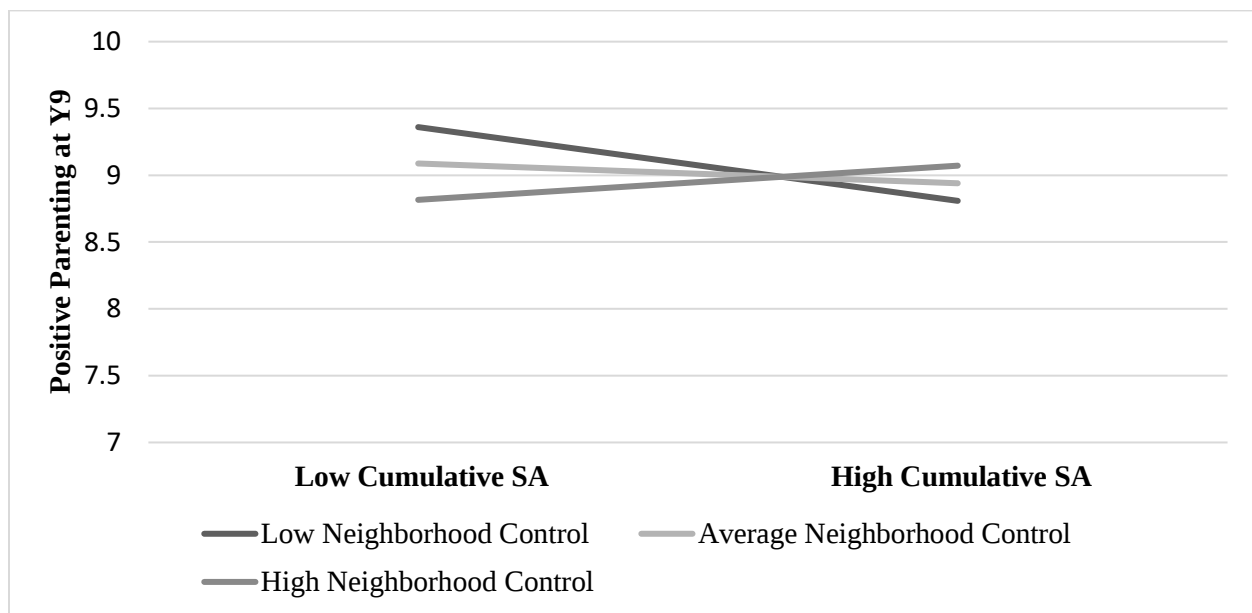


Figure A.3. Interaction between Cumulative Socioeconomic Adversity and Neighborhood Social Control within White Families

Note. The association between cumulative socioeconomic adversity and mothers' positive parenting behaviors was significant at low levels of perceived neighborhood control ($\beta = -.30$, 95% CI [-0.51, -0.11]) but not at average ($\beta = .10$, 95% CI [-0.27, 0.07]) or high ($\beta = .12$, 95% CI [-0.1, 0.33]) levels of perceived neighborhood control

APPENDIX B: PAPER 2 SUPPLEMENTAL TABLES & FIGURES

Table B.1. Descriptive Data for Study Covariates

	Non-Hispanic Black (<i>N</i> = 2,229)		Hispanic (<i>N</i> = 1,267)		Non-Hispanic White (<i>N</i> = 989)	
Covariates (Baseline)	M	SD	M	SD	M	SD
Mother's age	24.49	5.75	24.76	5.79	27.11	6.5
Mother's no. of bio kids	2.34	1.44	2.06	1.25	1.9	1.08
Mother's age at first birth	20.34	4.35	21.18	4.93	24.31	6.09
Child sex	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
<i>Female</i>	1061	47.6	616	48.62	468	47.32
<i>Male</i>	1168	52.4	651	51.38	521	52.68
Mother meets anxiety criteria						
<i>No</i>	2013	90.3	1135	89.58	908	91.81
<i>Yes</i>	61	2.74	32	2.53	37	3.74
Mother meets depression criteria						
<i>No</i>	1723	77.3	1013	79.95	799	80.79
<i>Yes</i>	354	15.88	155	12.23	146	14.76
Interview conducted in Spanish						
<i>No</i>	2064	92.6	833	65.75	958	96.87
<i>Yes</i>	6	0.27	314	24.78	5	0.51
Mother Born in the U.S.						
<i>No</i>	100	4.49	501	39.54	47	4.75
<i>Yes</i>	2121	95.15	766	60.46	941	95.24
Mother's SU Interference (Y1)						
<i>No</i>	2152	96.55	1235	97.47	956	96.66
<i>Yes</i>	75	3.36	29	2.29	32	3.24
Mother's SU Treatment (Y1)						
<i>No</i>	2126	92.6	1232	97.24	933	94.34
<i>Yes</i>	100	0.27	32	2.53	54	5.46

Table B.2. Created Substance Use Uptake/Continuum Scales

Scale score	Tobacco Use	Alcohol Use	Marijuana (MJ) Use
0	Never smoked	Never drank	Never tried marijuana
1	Ever smoked	Ever drank	Ever tried marijuana
2	Smoked in past month	Drank in past month	Used marijuana in past month
3	Smokes once or twice a week	Drinks one or two days a week	Used marijuana one or two days a week
4	Smoked nearly every day in the past month	Drank 5+ drinks at a time the last month	Used marijuana 3 days a week or more in the past month

Table B.3. Home Observation for the Measurement of the Environment (HOME) Items

Item No.	HOME Year 5 and 9 Items
1	Parent talked twice to the child during visit (beyond correction and introduction)
2	Parent verbally answered child's questions or requests
3	Parent encouraged child to contribute to conversation during visit
4	Parent helps child demonstrate some achievement or mentions a particular skill, strength, or achievement during visit.
5	<i>Parent spontaneously praises child's behavior or qualities twice during visit.</i>
6	Parent uses some term of endearment or some diminutive for child's name when talking about or to him/her at least twice during visit.
7	Parent's voice conveys positive feelings when speaking of or to child.
8	Parent caresses, kisses, or cuddles child once during visit.
9	Parent shouts at child during visit
10	Parent expresses overt annoyance with or hostility toward child [complains, describes him/her as "bad", says he won't mind, etc.
11	Parent slaps or spansks child during visit
12	Parent scolds, derogates or criticizes child more than once during visit

Note. Italicized item only included in Year 5 scale. Items 9-12 were reverse-coded

Table B.4. Bivariate Correlations Among Key Study Variables: non-Hispanic Black Families

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Cumulative SA	1.00											
(2) Chronic SA	0.81***	1.00										
(3) Early SA	0.81***	0.98***	1.00									
(4) Positive Parenting (Y5)	-0.20***	-0.15***	-0.15***	1.00								
(5) Positive Parenting (Y9)	-0.10***	-0.09***	-0.10***	0.18***	1.00							
(6) Self-Regulation (Y9)	-0.22***	-0.17***	-0.17***	0.20***	0.05	1.00						
(7) Tobacco Use	0.04*	0.04*	0.05*	-0.02	-0.02	-0.09***	1.00					
(8) Alcohol Use	0.02	0.02	0.02	-0.02	-0.03	-0.08**	0.25***	1.00				
(9) Marijuana Use	0.12***	0.11***	0.11***	-0.07**	-0.05**	-0.18***	0.31***	0.41***	1.00			
(10) Optimism	0.00	-0.03	-0.02	0.03	0.01	-0.02	-0.03	-0.10***	-0.06**	1.00		
(11) Connectedness	-0.04*	-0.06**	-0.06**	0.04	0.00	0.06*	-0.06**	-0.05**	-0.05**	0.41***	1.00	
(12) Happiness	0.01	-0.01	-0.02	0.01	-0.02	-0.04	-0.09***	-0.10***	-0.06***	0.48***	0.52***	1.00

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. $N = 2,229$

Table B.5. Bivariate Correlations Among Key Study Variables: Hispanic Families

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Cumulative SA	1.00											
(2) Chronic SA	0.82***	1.00										
(3) Early SA	0.82***	0.98	1.00									
(4) Positive Parenting Y5	-0.16***	-0.13***	-0.13***	1.00								
(5) Positive Parenting Y9	-0.11***	-0.10***	-0.09**	0.19***	1.00							
(6) Self-Regulation	-0.08*	-0.09**	-0.09**	0.08	0.19***	1.00						
(7) Tobacco Use	0.03	0.01	0.01	-0.01	0.01	-0.08*	1.00					
(8) Alcohol Use	0.05	0.07*	0.06*	-0.03	-0.02	-0.01	0.35***	1.00				
(9) Marijuana Use	0.08**	0.06*	0.05	-0.03	0.02	-0.07	0.45***	0.58***	1.00			
(10) Optimism	0.01	0.00	0.00	0.07	0.02	-0.01	-0.13***	-0.13***	-0.12***	1.00		
(11) Connectedness	-0.06*	-0.06*	-0.07**	0.06	0.03	0.02	-0.06*	-0.12***	-0.09**	0.41***	1.00	
(12) Happiness	-0.04	-0.03	-0.04	0.05	0.05	-0.01	-0.17***	-0.20***	-0.18***	0.50***	0.55***	1.00

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. $N = 1,267$

Table B.6. Bivariate Correlations Among Key Study Variables: non-Hispanic White Families

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) Cumulative SA	1.00											
(2) Chronic SA	0.80***	1.00										
(3) Early SA	0.80***	0.97***	1.00									
(4) Positive Parenting (Y5)	-0.25***	-0.18***	-0.20***	1.00								
(5) Positive Parenting (Y9)	-0.11***	-0.07*	-0.07*	0.11**	1.00							
(6) Self-Regulation (Y9)	-0.22***	-0.22***	-0.22***	0.14**	0.06	1.00						
(7) Tobacco Use	0.19***	0.19***	0.18***	0.04	-0.02	-0.05	1.00					
(8) Alcohol Use	-0.01	0.05	0.04	0.09*	0.02	0.03	0.43***	1.00				
(9) Marijuana Use	0.11***	0.14***	0.14***	0.03	0.01	-0.07	0.37***	0.54***	1.00			
(10) Optimism	-0.10***	-0.06*	-0.07*	0.17***	0.00	0.16***	-0.07*	0.00	-0.06*	1.00		
(11) Connectedness	-0.09**	-0.08**	-0.07*	-0.01	0.03	0.13***	-0.05	-0.08***	-0.10***	0.47***	1.00	
(12) Happiness	-0.17***	-0.12***	-0.12***	0.07	0.02	0.11*	-0.08***	-0.05	-0.13***	0.64***	0.53***	1.00

Note. * $p < .05$; ** $p < .01$; *** $p < .001$. $N = 989$.

Table B.7. Model Fit Information Across all Models for each Race/Ethnic Sample

Model no.	Model	Model Fit Information		
		Black Families	Hispanic Families	White Families
(1) a	Cumulative SA/PP(y5)	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.03, CFI=.96, TLI=.93, SRMR=.03
(1) b	Cumulative SA/PP(y9)	RMSEA=.02, CFI=.96, TLI=.94, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.03, CFI=.97, TLI=.94, SRMR=.02
(2) a	Chronic SA/PP(y5)	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.03, CFI=.96, TLI=.94, SRMR=.02
(2) b	Chronic SA/PP(y9)	RMSEA=.02, CFI=.96, TLI=.93, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.96, SRMR=.02	RMSEA=.03, CFI=.97, TLI=.95, SRMR=.02
(3) a	Early SA/PP(y5)	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02	RMSEA=.03, CFI=.96, TLI=.93, SRMR=.03
(3) b	Early SA/PP(y9)	RMSEA=.02, CFI=.96, TLI=.93, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.96, SRMR=.02	RMSEA=.02, CFI=.97, TLI=.95, SRMR=.02

Note. Models were run without Monte Carlo integration to obtain model fit information. SA = Socioeconomic Adversity; PP = Positive Parenting; RMSEA = Root Mean Square Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; SRMR = Standardized Root Mean Square Residual

Table B.8. Variance Explained for Each Child Outcome

Model No.	Model	<i>R</i> ²								
		BLACK FAMILIES			HISPANIC FAMILIES			WHITE FAMILIES		
		SR	WB	SU	SR	WB	SU	SR	WB	SU
(1) a	Cumulative SA/PP(y5)	0.104	0.018	0.087	0.138	0.11	0.072	0.136	0.125	0.053
(1) b	Cumulative SA/PP(y9)	0.102	0.021	0.089	0.079	0.061	0.051	0.128	0.129	0.06
(2) a	Chronic SA/PP(y5)	0.12	0.019	0.089	0.14	0.11	0.071	0.117	0.122	0.062
(2) b	Chronic SA/PP(y9)	0.095	0.02	0.089	0.081	0.06	0.051	0.112	0.125	0.069
(3) a	Early SA/PP(y5)	0.121	0.019	0.088	0.141	0.11	0.071	0.117	0.121	0.059
(3) b	Early SA/PP(y9)	0.093	0.02	0.089	0.082	0.061	0.05	0.113	0.125	0.066

Note. SA = Socioeconomic Adversity; PP = Positive Parenting; SR = Self-Regulation; WB = Wellbeing; SU = Substance Use. Self-regulation assessed at Year 9, wellbeing and substance use assessed at Year 15.

REFERENCES

- Aber, J. L., Bennett, N. G., Conley, D. C., & Li, J. (1997). The effects of poverty on child health and development. *Annual Review of Public Health, 18*(1), 463–483.
<https://doi.org/10.1146/annurev.publhealth.18.1.463>
- Anand, K. J. S., Rigdon, J., Rovnaghi, C. R., Qin, F. F., Tembulkar, S., Bush, N., LeWinn, K., Tylovsky, F. A., Davis, R., Barr, D. A., & Gotlib, I. H. (2019). Measuring socioeconomic adversity in early life. *Acta Paediatrica, International Journal of Paediatrics, 108*(7), 1267–1277. <https://doi.org/10.1111/apa.14715>
- Ash, C., & Huebner, E. S. (2001). Environmental events and life satisfaction reports of adolescents: A test of cognitive mediation. *School Psychology International, 22*(3), 320–336. <https://doi.org/10.1177/0143034301223008>
- Assari, S., Caldwell, C., & Mincy, R. (2018). Family socioeconomic status at birth and youth impulsivity at age 15: Blacks’ diminished return. *Children, 5*(5), 58.
<https://doi.org/10.3390/children5050058>
- Atherton, O. E., Lawson, K. M., & Robins, R. W. (2020). The development of effortful control from late childhood to young adulthood. *Journal of Personality and Social Psychology, 119*(2), 417–456. <https://doi.org/10.1037/pspp0000283>
- Atherton, O. E., Tackett, J. L., Ferrer, E., & Robins, R. W. (2017). Bidirectional pathways between relational aggression and temperament from late childhood to adolescence. *Journal of Research in Personality, 67*, 75–84. <https://doi.org/10.1016/j.jrp.2016.04.005>
- Bachman, J. G., O’Malley, P. M., Johnston, L. D., Schulenberg, J. E., & Wallace, J. M. (2011). Racial/ethnic differences in the relationship between parental education and substance use among U.S. 8th-, 10th-, and 12th-grade students: Findings from the monitoring the future project. *Journal of Studies on Alcohol and Drugs, 72*(2), 279–285.
<https://doi.org/10.15288/jsad.2011.72.279>
- Bámaca-Colbert, M. Y., Gonzales-Backen, M., Henry, C. S., Kim, P. S. Y., Roblyer, M. Z., Plunkett, S. W., & Sands, T. (2018). Family profiles of cohesion and parenting practices and Latino youth adjustment. *Family Process, 57*(3), 719–736.
<https://doi.org/10.1111/famp.12314>
- Barbot, B., Crossman, E., Hunter, S. R., Grigorenko, E. L., & Luthar, S. S. (2014). Reciprocal influences between maternal parenting and child adjustment in a high-risk population: A 5-year cross-lagged analysis of bidirectional effects. *American Journal of Orthopsychiatry, 84*(5), 567–580. <https://doi.org/10.1037/ort0000012>

- Barnett, M. A., Mortensen, J. A., Gonzalez, H., & Gonzalez, J. M. (2016). Cultural factors moderating links between neighborhood disadvantage and parenting and coparenting among Mexican origin families. *Child and Youth Care Forum*, 45(6), 927–945. <https://doi.org/10.1007/s10566-016-9365-y>
- Barnhart, S., & Maguire-Jack, K. (2016). Single mothers in their communities: The mediating role of parenting stress and depression between social cohesion, social control and child maltreatment. *Children and Youth Services Review*, 70, 37–45. <https://doi.org/10.1016/j.childyouth.2016.09.003>
- Baumrind, D., Larzelere, R. E., & Owens, E. B. (2010). Effects of preschool parents' power assertive patterns and practices on adolescent development. *Parenting*, 10(3), 157–201. <https://doi.org/10.1080/15295190903290790>
- Beck, A. N., Cooper, C. E., McLanahan, S., & Brooks-Gunn, J. (2010). Partnership transitions and maternal parenting. *Journal of Marriage and Family*, 72(2), 219–233. <https://doi.org/10.1111/j.1741-3737.2010.00695.x>
- Benson, P., & Scales, P. C. (2009). The definition and preliminary measurement of thriving in adolescence. *Journal of Positive Psychology*, 4(1), 85–104. <https://doi.org/10.1080/17439760802399240>
- Berger, A., Kofman, O., Livneh, U., & Henik, A. (2007). Multidisciplinary perspectives on attention and the development of self-regulation. *Progress in Neurobiology*, 82(5), 256–286. <https://doi.org/10.1016/j.pneurobio.2007.06.004>
- Bernard, D. L., Jones, S. C. T., & Volpe, V. V. (2020). Impostor phenomenon and psychological well-being: The moderating roles of John Henryism and school racial composition among Black college students. *Journal of Black Psychology*, 46(2–3), 195–227. <https://doi.org/10.1177/0095798420924529>
- Berry, D., Blair, C., Willoughby, M., Garrett-Peters, P., Vernon-Feagans, L., Mills-Koonce, W. R., Cox, M., Burchinal, P., Burton, L., Crnic, K., Crouter, A., Greenberg, M., Lanza, S., & Werner, E. (2016). Household chaos and children's cognitive and socio-emotional development in early childhood: Does childcare play a buffering role? *Early Childhood Research Quarterly*, 34, 115–127. <https://doi.org/10.1016/j.ecresq.2015.09.003>
- Blair, C., & Dennis, T. (2010). An optimal balance: The integration of emotion and cognition in context. In S. D. Calkins & M. A. Bell (Eds.), *Child development at the intersection of emotion and cognition* (pp. 17–35). American Psychological Association. <https://doi.org/10.1037/12059-002>
- Blair, C., Granger, D. A., Willoughby, M., Mills-Koonce, R., Cox, M., Greenberg, M. T., Kivlighan, K. T., & Fortunato, C. K. (2011). Salivary cortisol mediates effects of poverty and parenting on executive functions in early childhood. *Child Development*, 82(6), 1970–1984. <https://doi.org/10.1111/j.1467-8624.2011.01643.x>

- Blair, C., & Raver, C. C. (2012a). Child development in the context of adversity. *American Psychologist*, 67(4), 309–318. <https://doi.org/10.1037/a0027493>
- Blair, C., & Raver, C. C. (2012b). Individual development and evolution: Experiential canalization of self-regulation. *Developmental Psychology*, 48(3), 647–657. <https://doi.org/10.1037/a0026472>
- Blair, C., & Raver, C. C. (2016). Poverty, stress, and brain development: New directions for prevention and intervention. *Academic Pediatrics*, 16(3), S30–S36. <https://doi.org/10.1016/j.acap.2016.01.010>
- Blair, C., & Ursache, A. (2011). A bidirectional model of executive functions and self-regulation. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (2nd ed). Guilford Press.
- Blais, C., Harris, M. B., Guerrero, J. V., & Bunge, S. A. (2012). Rethinking the role of automaticity in cognitive control. *Quarterly Journal of Experimental Psychology*, 65(2), 268–276. <https://doi.org/10.1080/17470211003775234>
- Barr, M. S. & Blank, R. M. (2009). Savings, assets, credit, and banking among low-income households: Introduction and overview. In R. M. Blank & M. S. Barr (Eds.), *Insufficient funds: Savings, assets, credit, and banking among low-income households* (pp. 1–22). Russell Sage Foundation. <https://doi.org/10.1177/0094306110380384f>
- Boushey, H., Brocht, C., Gundersen, B., & Bernstein, J. (2001). *Hardships in America: The real story of working families*. Economic Policy Institute, 1660 L Street NW, Suite 1200, Washington, DC 20036.
- Bowers, E. P., Gestsdottir, S., Geldhof, G. J., Nikitin, J., von Eye, A., & Lerner, R. M. (2011). Developmental trajectories of intentional self-regulation in adolescence: The role of parenting and implications for positive and problematic outcomes among diverse youth. *Journal of Adolescence*, 34(6), 1193–1206. <https://doi.org/10.1016/j.adolescence.2011.07.006>
- Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology*, 53, 371–399. <https://doi.org/10.1146annurev.psych.53.100901.135233>
- Brandes-Aitken, A., Braren, S., Swingler, M., Voegtline, K., & Blair, C. (2019). Sustained attention in infancy: A foundation for the development of multiple aspects of self-regulation for children in poverty. *Journal of Experimental Child Psychology*, 184, 192–209. <https://doi.org/10.1016/j.jecp.2019.04.006>
- Brody, G. H., & Flor, D. L. (1998). Maternal resources, parenting practices, and child competence in rural, single-parent African American families. *Child Development*, 69(3), 803–816. <https://doi.org/10.1111/j.1467-8624.1998.tb06244.x>

- Brody, G. H., Flor, D. L., & Gibson, N. M. (1999). Linking maternal efficacy beliefs, developmental goals, parenting practices, and child competence in rural single-parent African American families. *Child Development, 70*(5), 1197–1208. <https://doi.org/10.1111/1467-8624.00087>
- Brody, G. H., Ge, X., Conger, R., Gibbons, F. X., Murry, V. M. B., Gerrard, M., & Simons, R. L. (2001). The influence of neighborhood disadvantage, collective socialization, and parenting on African American children's affiliation with deviant peers. *Child Development, 72*(4), 1231–1246. <https://doi.org/10.1111/1467-8624.00344>
- Brody, G. H., Stoneman, Z., & Flor, D. (1996). Parental religiosity, family processes, and youth competence in rural, two-parent African American families. *Developmental Psychology, 32*(4), 696–706. <https://doi.org/10.1037/0012-1649.32.4.696>
- Brody, G. H., Yu, T., & Beach, S. R. H. (2016). Resilience to adversity and the early origins of disease. *Development and Psychopathology, 28*(4), 1347–1365. <https://doi.org/10.1017/S0954579416000894>
- Brody, G. H., Yu, T., Chen, Y., Kogan, S. M., Evans, G. W., Beach, S. R. H., Windle, M., Simons, R. L., Gerrard, M., Gibbons, F. X., & Philibert, R. A. (2013). Cumulative socioeconomic status risk, allostatic load, and adjustment: A prospective latent profile analysis with contextual and genetic protective factors. *Developmental Psychology, 49*(5), 913–927. <https://doi.org/10.1037/a0028847>
- Brooks-Gunn, J., & Duncan, G. J. (1997). The effects of poverty on children. *Future of Children, 7*(2), 55–71. <https://doi.org/10.2307/1602387>
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research* (2nd ed.). The Guilford Press.
- Brown, S. L. (2004). Family structure and child well-being: The significance of parental cohabitation. *Journal of Marriage and Family, 66*(2), 351–367. <https://doi.org/10.1111/j.1741-3737.2004.00025.x>
- Brown, S. L., Manning, W. D., & Stykes, J. B. (2015). Family structure and child well-being: Integrating family complexity. *Journal of Marriage and Family, 77*(1), 177–190. <https://doi.org/10.1111/jomf.12145>
- Brown, S. L., Stykes, J. B., & Manning, W. D. (2016). Trends in children's family instability, 1995-2010. *Journal of Marriage and Family, 78*(5), 1173–1183. <https://doi.org/10.1111/jomf.12311>
- Brumley, L. D., & Jaffee, S. R. (2016). Defining and distinguishing promotive and protective effects for childhood externalizing psychopathology: A systematic review. *Social Psychiatry and Psychiatric Epidemiology, 51*(6), 803–815. <https://doi.org/10.1007/s00127-016-1228-1>

- Buckner, J. C., Mezzacappa, E., & Beardslee, W. R. (2009). Self-regulation and its relations to adaptive functioning in low income youths. *American Journal of Orthopsychiatry*, 79(1), 19–30. <https://doi.org/10.1037/a0014796>
- Buehler, C., & Gerard, J. M. (2013). Cumulative family risk predicts increases in adjustment difficulties across early adolescence. *Journal of Youth and Adolescence*, 42(6), 905–920. <https://doi.org/10.1007/s10964-012-9806-3>
- Buijs, T., Maes, L., Salonna, F., Van Damme, J., Hublet, A., Kebza, V., Costongs, C., Currie, C., & De Clercq, B. (2016). The role of community social capital in the relationship between socioeconomic status and adolescent life satisfaction: mediating or moderating? Evidence from Czech data. *International Journal for Equity in Health*, 15(1), 1–12. <https://doi.org/10.1186/s12939-016-0490-x>
- Burchinal, M. R., Follmer, A., & Bryant, D. M. (1996). The relations of maternal social support and family structure with maternal responsiveness and child outcomes among African American families. *Developmental Psychology*, 32(6), 1073–1083. <https://doi.org/10.1037/0012-1649.32.6.1073>
- Burton, P., & Phipps, S. (2008). Economic resources, relative socioeconomic position and social relationships: Correlates of the happiness of young Canadian teens. *Child Indicators Research*, 1(4), 350–371. <https://doi.org/10.1007/s12187-008-9014-6>
- Byrnes, H. F., & Miller, B. A. (2012). The relationship between neighborhood characteristics and effective parenting behaviors: The role of social support. *Journal of Family Issues*, 33(12), 1658–1687. <https://doi.org/10.1177/0192513X12437693>
- Cabrera, N. J. (2013). Positive development of minority children and commentaries. *Social Policy Report*, 27(2), 1–30. <https://doi.org/10.1002/j.2379-3988.2013.tb00075.x>
- Caldwell, B. M., & Bradley, R. H. (2003). HOME inventory and administration manual. *University of Arkansas for Medical Sciences and University of Arkansas at Little Rock*.
- Cambron, C., Kosterman, R., Catalano, R. F., Guttmanova, K., & Hawkins, J. D. (2018). Neighborhood, family, and peer factors associated with early adolescent smoking and alcohol use. *Journal of Youth and Adolescence*, 47(2), 369–382. <https://doi.org/10.1007/s10964-017-0728-y>
- Campbell, C., & Pearlman, J. (2019). Access to social network support and material hardship. *Social Currents*, 6(3), 284–304. <https://doi.org/10.1177/2329496518820630>
- Cardoso, J. B., Padilla, Y. C., & Sampson, M. (2010). Racial and ethnic variation in the predictors of maternal parenting stress. *Journal of Social Service Research*, 36(5), 429–444. <https://doi.org/10.1080/01488376.2010.510948>
- Carliner, H., Delker, E., Fink, D. S., Keyes, K. M., & Hasin, D. S. (2016). Racial discrimination, socioeconomic position, and illicit drug use among US Blacks. *Social Psychiatry and Psychiatric Epidemiology*, 51(4), 551–560. <https://doi.org/10.1007/s00127-016-1174-y>

- Carpiano, R. M., & Kimbro, R. T. (2012). Neighborhood social capital, parenting strain, and personal mastery among female primary caregivers of children. *Journal of Health and Social Behavior*, 53(2), 232–247. <https://doi.org/10.1177/0022146512445899>
- Carter, A. S., Wagmiller, R. J., Gray, S. A. O., McCarthy, K. J., Horwitz, S. M., & Briggs-Gowan, M. J. (2010). Prevalence of DSM-IV Disorder in a representative, healthy birth cohort at school entry: Sociodemographic risks and social adaptation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 49(7), 686–698. <https://doi.org/10.1016/j.jaac.2010.03.018>
- Casanueva, C., Dolan, M., Smith, K., Ringeisen, H., & Dowd, K. (2012). Indicators of well-being among children in the United States child welfare system. *Child Indicators Research*, 5(3), 547–565. <https://doi.org/10.1007/s12187-012-9148-4>
- Cassells, R. C., & Evans, G. W. (2017). Ethnic variation in poverty and parenting stress. In K. Deater-Deckard & R. Panneton (Eds.), *Parental stress and early child development: Adaptive and maladaptive outcomes* (pp. 15–45). Springer International Publishing. https://doi.org/10.1007/978-3-319-55376-4_2
- Cavanagh, S. E., & Fomby, P. (2019). Family instability in the lives of American children. *Annual Review of Sociology*, 45(1), 493–513. <https://doi.org/10.1146/annurev-soc-073018-022633>
- Ceballo, R., & McLoyd, V. C. (2002). Social support and parenting in poor, dangerous neighborhoods. *Child Development*, 73(4), 1310–1321. <https://doi.org/10.1111/1467-8624.00473>
- Center on the Developing Child at Harvard University (2011). *Building the brain's "air traffic control system": How early experiences shape the development of executive function: Working paper No. 11*. <https://developingchild.harvard.edu/resources/building-the-brains-air-traffic-control-system-how-early-experiences-shape-the-development-of-executive-function/>
- Center on the Developing Child at Harvard University (2016). *Building core capabilities for life: The science behind the skills adults need to succeed in parenting and in the workplace*. <https://developingchild.harvard.edu/resources/building-core-capabilities-for-life/>
- Chase-Lansdale, L. P., & Brooks-Gunn, J. (2014). Two-generation programs in the twenty-first century. *Future of Children*, 24(1), 13–39. <https://doi.org/10.1353/foc.2014.0003>
- Chaudry, A., & Wimer, C. (2016). Poverty is not just an indicator: The relationship between income, poverty, and child well-being. *Academic Pediatrics*, 16(3), S23–S29. <https://doi.org/10.1016/j.acap.2015.12.010>
- Chen, E., Miller, G. E., Kobor, M. S., & Cole, S. W. (2011). Maternal warmth buffers the effects of low early-life socioeconomic status on pro-inflammatory signaling in adulthood. *Molecular Psychiatry*, 16(7), 729–737. <https://doi.org/10.1038/mp.2010.53>

- Chen, P., & Jacobson, K. C. (2012). Developmental trajectories of substance use from early adolescence to young adulthood: Gender and racial/ethnic differences. *Journal of Adolescent Health, 50*(2), 154–163. <https://doi.org/10.1016/j.jadohealth.2011.05.013>
- Chen, W., Niu, G. F., Zhang, D. J., Fan, C. Y., Tian, Y., & Zhou, Z. K. (2016). Socioeconomic status and life satisfaction in Chinese adolescents: Analysis of self-esteem as a mediator and optimism as a moderator. *Personality and Individual Differences, 95*, 105–109. <https://doi.org/10.1016/j.paid.2016.01.036>
- Chetty, R., Hendren, N., Jones, M. R., & Porter, S. R. (2020). Race and economic opportunity in the United States: An intergenerational perspective. *The Quarterly Journal of Economics, 135*(2), 711–783. <https://doi.org/10.1093/qje/qjz042>
- Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment. *The American Economic Review, 106*(4), 855–902. <https://doi.org/10.1257/aer.20150572>
- Choi, J. K., Kelley, M. S., & Wang, D. (2018). Neighborhood characteristics, maternal parenting, and health and development of children from socioeconomically disadvantaged families. *American Journal of Community Psychology, 62*(3–4), 476–491. <https://doi.org/10.1002/ajcp.12276>
- Chung, H. L., & Steinberg, L. (2006). Relations between neighborhood factors, parenting behaviors, peer deviance, and delinquency among serious juvenile offenders. *Developmental Psychology, 42*(2), 319–331. <https://doi.org/10.1037/0012-1649.42.2.319>
- Clark, D. A., Donnellan, M. B., Robins, R. W., & Conger, R. D. (2015). Early adolescent temperament, parental monitoring, and substance use in Mexican-origin adolescents. *Journal of Adolescence, 41*, 121–130. <https://doi.org/10.1016/j.adolescence.2015.02.010>
- Coates, E. E., Tran, Q., Le, Y., & Phares, V. (2019). Parenting, coparenting, and adolescent adjustment in African American single-mother families: An actor-partner interdependence mediation model. *Journal of Family Psychology, 33*(6), 649–660. <https://doi.org/10.1037/fam0000552>
- Conger, R. D., & Conger, K. J. (2002). Resilience in midwestern families: Selected findings from the first decade of a prospective, longitudinal study. *Journal of Marriage and Family, 64*(2), 361–373. <https://doi.org/10.1111/j.1741-3737.2002.00361.x>
- Conger R. D. & Conger K. J. (2008). Understanding the processes through which economic hardship influences families and children. In R. D. Crane & T. B. Heaton (Eds.), *Handbook of families and poverty* (pp. 64–82). SAGE Publications, Inc. DOI 10.4135/9781412976596.n5
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development, 63*(3), 526. <https://doi.org/10.2307/1131344>

- Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. *Journal of Marriage and Family*, 72(3) 685–704.
<https://doi.org/10.1111/j.1741-3737.2010.00725.x>
- Conger, R. D., Conger, K. J., Matthews, L. S., & Elder Jr, G. H. (1999). Pathways of economic influence on adolescent adjustment. *American Journal of Community Psychology*, 27(4), 519-541.
- Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology*, 58(1), 175–199.
<https://doi.org/10.1146/annurev.psych.58.110405.085551>
- Conger, R. D., Ge, X., Elder Jr, G. H., Lorenz, F. O., & Simons, R. L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child development*, 65(2), 541-561.
- Conger, K. J., Martin, M. J., Reeb, B. T., Little, W. M., Craine, J. L., Shebloski, B., & Conger, R. D. (2012a). Economic hardship and its consequences across generations. In V. Maholmes & R. B. King (Eds.), *The Oxford handbook of poverty and child development* (pp. 37–53). Oxford University Press.
- Conger, R. D., Song, H., Stockdale, G. D., Ferrer, E., Widaman, K. F., & Cauce, A. M. (2012b). Resilience and vulnerability of Mexican origin youth and their families: A test of a culturally informed model of family economic stress. In P. K. Kerig, M. S. Schulz, & S. T. Hauser (Eds.), *Adolescence and beyond: Family processes and development* (pp. 268–286). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199736546.003.0017>
- Conger, R. D., Wallace, L. E., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental psychology*, 38(2), 179.
<https://doi.org/10.1037/0012-1649.38.2.179>
- Copeland, D., & Harbaugh, B. L. (2005). Differences in parenting stress between married and single first time mothers at six to eight weeks after birth. *Comprehensive Child and Adolescent Nursing*, 28(3) 139-152. <https://doi.org/10.1080/01460860500227556>
- Crespo, L. M., Trentacosta, C. J., Udo-Inyang, I., Northerner, L., Chaudhry, K., & Williams, A. (2019). Self-regulation mitigates the association between household chaos and children's behavior problems. *Journal of Applied Developmental Psychology*, 60, 56–64.
<https://doi.org/10.1016/j.appdev.2018.10.005>
- Cuellar, J., Jones, D. J., & Sterrett, E. (2013). Examining Parenting in the Neighborhood Context: A Review. *Journal of Child and Family Studies*, 24(1), 195–219.
<https://doi.org/10.1007/s10826-013-9826-y>

- Damaske, S., Bratter, J. L., & Frech, A. (2017). Single mother families and employment, race, and poverty in changing economic times. *Social Science Research*, 62, 120–133. <https://doi.org/10.1016/j.ssresearch.2016.08.008>
- Daneri, M. P., Sulik, M. J., Raver, C. C., & Morris, P. A. (2018). Observers' reports of self-regulation: Measurement invariance across sex, low-income status, and race/ethnicity. *Journal of Applied Developmental Psychology*, 55, 14–23. <https://doi.org/10.1016/j.appdev.2017.02.001>
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, 113(3), 487. <https://doi.org/10.1037//0033-2909>
- Daundasekara, S. S., Schuler, B. R., Beauchamp, J. E. S., & Hernandez, D. C. (2021). The mediating effect of parenting stress and couple relationship quality on the association between material hardship trajectories and maternal mental health status. *Journal of Affective Disorders*, 290, 31–39. <https://doi.org/10.1016/j.jad.2021.04.058>
- Daundasekara, S. S., Schuler, B. R., & Hernandez, D. C. (2020). Stability and change in early life economic hardship trajectories and the role of sex in predicting adolescent overweight/obesity. *Journal of Youth and Adolescence*, 49(8), 1645–1662. <https://doi.org/10.1007/s10964-020-01249-3>
- Dauner, K. N., Wilmot, N. A., & Schultz, J. F. (2015). Investigating the temporal relationship between individual-level social capital and health in fragile families. *BMC Public Health*, 15(1), 1–10. <https://doi.org/10.1186/s12889-015-2437-3>
- Dearing, E. (2004). The developmental implications of restrictive and supportive parenting across neighborhoods and ethnicities: Exceptions are the rule. *Journal of Applied Developmental Psychology*, 25(5), 555–575. <https://doi.org/10.1016/j.appdev.2004.08.007>
- DeCarlo, C. S., Wadsworth, M. E., & Stump, J. (2011). Socioeconomic status, neighborhood disadvantage, and poverty-related stress: Prospective effects on psychological syndromes among diverse low-income families. *Journal of Economic Psychology*, 32(2), 218–230. <https://doi.org/10.1016/j.joep.2009.10.008>
- DeVore, E. R., & Ginsburg, K. R. (2005). The protective effects of good parenting on adolescents. *Current Opinion in Pediatrics*, 17(4), 460–465. <https://doi.org/10.1097/01.mop.0000170514.27649.c9>
- Dickerson, A., & Popli, G. K. (2016). Persistent poverty and children's cognitive development: Evidence from the UK Millennium Cohort Study. *Journal of the Royal Statistical Society. Series A: Statistics in Society*, 179(2), 535–558. <https://doi.org/10.1111/rssa.12128>
- Doan, S. N., Fuller-Rowell, T. E., & Evans, G. W. (2012). Cumulative risk and adolescent's internalizing and externalizing problems: The mediating roles of maternal responsiveness and self-regulation. *Developmental Psychology*, 48(6), 1529–1539. <https://doi.org/10.1037/a0027815>

- Domínguez, S., & Watkins, C. (2003). Creating networks for survival and mobility: Social capital among African-American and Latin-American low-income mothers. *Social Problems*, 50(1), 111–135. <https://doi.org/10.1525/sp.2003.50.1.111>
- Dorsey, S., & Forehand, R. (2003). The relation of social capital to child psychosocial adjustment difficulties: The role of positive parenting and neighborhood dangerousness. *Journal of Psychopathology and Behavioral Assessment*, 25(1), 11–23. <https://doi.org/10.1023/A:1022295802449>
- Doty, J. L., Davis, L., & Arditti, J. A. (2017). Cascading resilience: Leverage points in promoting parent and child well-being. *Journal of Family Theory and Review*, 9(1), 111–126. <https://doi.org/10.1111/jftr.12175>
- DuBois, D. L., Felner, R. D., Meares, H., & Krier, M. (1994). Prospective investigation of the effects of socioeconomic disadvantage, life stress, and social support on early adolescent adjustment. *Journal of Abnormal Psychology*, 103(3), 511–522. <https://doi.org/10.1037/0021-843X.103.3.511>
- Duncan, G. J., Magnuson, K., Kalil, A., & Ziol-Guest, K. (2012). The importance of early childhood poverty. *Social Indicators Research*, 108(1), 87–98. <https://doi.org/10.1007/s11205-011-9867-9>
- Duncan, G. J., Ziol-Guest, K. M., & Kalil, A. (2010). Early-childhood poverty and adult attainment, behavior, and health. *Child Development*, 81(1), 306–325. <https://doi.org/10.1111/j.1467-8624.2009.01396.x>
- Duran, C. A. K., Cottone, E., Ruzek, E. A., Mashburn, A. J., & Grissmer, D. W. (2020). Family stress processes and children's self-regulation. *Child Development*, 91(2), 577–595. <https://doi.org/10.1111/cdev.13202>
- Eamon, M. K. (2001). The effects of poverty on children's socioemotional development: An ecological systems analysis. *Social Work*, 46(3), 256–266. <https://doi.org/10.1093/sw/46.3.256>
- Eisenberg, N., Cumberland, A., Spinrad, T. L., Fabes, R. A., Shepard, S. A., Reiser, M., Murphy, B. C., Losoya, S. H., & Guthrie, I. K. (2001). The relations of regulation and emotionality to children's externalizing and internalizing problem behavior. *Child Development*, 72(4), 1112–1134. <https://doi.org/10.1111/1467-8624.00337>
- Eisenberg, N., Fabes, R. A., Murphy, B., Maszk, P., Smith, M., & Karbon, M. (1995). The role of emotionality and regulation in children's social functioning: A longitudinal study. *Child Development*, 66(5), 1360–1384. <https://doi.org/10.2307/1131652>
- Eisenberg, N., Spinrad, T. L., & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children's maladjustment. *Annual Review of Clinical Psychology*, 6(1), 495–525. <https://doi.org/10.1146/annurev.clinpsy.121208.131208>

- Emmen, R. A. G., Malda, M., Mesman, J., van Ijzendoorn, M. H., Prevoe, M. J. L., & Yeniad, N. (2013). Socioeconomic status and parenting in ethnic minority families: Testing a minority family stress model. *Journal of Family Psychology*, 27(6), 896–904. <https://doi.org/10.1037/a0034693>
- Eriksson, M. (2011). Social capital and health--implications for health promotion. *Global Health Action*, 4, 5611. <https://doi.org/10.3402/gha.v4i0.5611>
- Evans, G. W., & English, K. (2002). The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Development*, 73(4), 1238–1248. <https://doi.org/10.1111/1467-8624.00469>
- Evans, G. W., Gonnella, C., Marcynyszyn, L. A., Gentile, L., & Salpekar, N. (2005). The role of chaos in poverty and children's socioemotional adjustment. *Psychological Science*, 16(7), 560–565. <https://doi.org/10.1111/j.0956-7976.2005.01575.x>
- Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43–48. <https://doi.org/10.1111/cdep.12013>
- Evans, G. W., Kim, P., Ting, A. H., Tesher, H. B., & Shannis, D. (2007). Cumulative risk, maternal responsiveness, and allostatic load among young adolescents. *Developmental Psychology*, 43(2), 341–351. <https://doi.org/10.1037/0012-1649.43.2.341>
- Evans, G. W., & Kutcher, R. (2011). Loosening the link between childhood poverty and adolescent smoking and obesity: The protective effects of social capital. *Psychological Science*, 22(1), 3–7. <https://doi.org/10.1177/0956797610390387>
- Evans, G. W., Li, D., & Whipple, S. S. (2013). Cumulative risk and child development. *Psychological Bulletin*, 139(6), 1342–1396. <https://doi.org/10.1037/a0031808>
- Ey, S., Hadley, W., Allen, D. N., Palmer, S., Klosky, J., Deptula, D., Thomas, J., & Cohen, R. (2005). A new measure of children's optimism and pessimism: the youth life orientation test. *Journal of Child Psychology and Psychiatry*, 46(5), 548–558. <https://doi.org/10.1111/j.1469-7610.2004.00372.x>
- Farley, J. P., & Kim-Spoon, J. (2017). Parenting and adolescent self-regulation mediate between family socioeconomic status and adolescent adjustment. *Journal of Early Adolescence*, 37(4), 502–524. <https://doi.org/10.1177/0272431615611253>
- Farmer, M. M., & Ferraro, K. F. (2005). Are racial disparities in health conditional on socioeconomic status? *Social Science and Medicine*, 60(1), 191–204. <https://doi.org/10.1016/j.socscimed.2004.04.026>
- Fava, N. M., Trucco, E. M., Martz, M. E., Cope, L. M., Jester, J. M., Zucker, R. A., & Heitzeg, M. M. (2019). Childhood adversity, externalizing behavior, and substance use in adolescence: Mediating effects of anterior cingulate cortex activation during inhibitory errors. *Development and Psychopathology*, 31(4), 1439–1450. <https://doi.org/10.1017/S0954579418001025>

- Felner, R. D., Brand, S., DuBois, D. L., Adan, A. M., Mulhall, P. F., & Evans, E. G. (1995). Socioeconomic disadvantage proximal environmental experiences and socioemotional and academic adjustment in early adolescence: Investigation of a mediated effects model. *Child Development*, 66(3), 774. <https://doi.org/10.2307/1131950>
- Felner, R. D., & DeVries, M. L. (2013). Poverty in childhood and adolescence: A transactional–ecological approach to understanding and enhancing resilience in contexts of disadvantage and developmental risk. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (Vol. 41, Issue 3, pp. 105–126). Springer US. https://doi.org/10.1007/978-1-4614-3661-4_7
- Finch, J. E., & Obradović, J. (2017). Unique effects of socioeconomic and emotional parental challenges on children’s executive functions. *Journal of Applied Developmental Psychology*, 52, 126–137. <https://doi.org/10.1016/j.appdev.2017.07.004>
- Fjell, A. M., Walhovd, K. B., Brown, T. T., Kuperman, J. M., Chung, Y., Hagler, D. J., Venkatraman, V., Cooper Roddey, J., Erhart, M., McCabe, C., Akshoomoff, N., Amaral, D. G., Bloss, C. S., Libiger, O., Darst, B. F., Schork, N. J., Casey, B. J., Chang, L., Ernst, T. M., ... Dale, A. M. (2012). Multimodal imaging of the self-regulating developing brain. *Proceedings of the National Academy of Sciences of the United States of America*, 109(48), 19620–19625. <https://doi.org/10.1073/pnas.1208243109>
- Flouri, E., Midouhas, E., Joshi, H., & Tzavidis, N. (2015). Emotional and behavioural resilience to multiple risk exposure in early life: The role of parenting. *European Child and Adolescent Psychiatry*, 24(7), 745–755. <https://doi.org/10.1007/s00787-014-0619-7>
- Ford, D. H., & Lerner, R. M. (1992). *Developmental systems theory: An integrative approach*. Sage Publications.
- Fry, R., Parker, K., & Center, P. R. (2018). *Early benchmarks show “post-millennials” on track to be most diverse, best-educated generation yet: A demographic portrait of today’s 6- to 21-year-olds*. Pew Research Center. <https://www.pewresearch.org/social-trends/2018/11/15/early-benchmarks-show-post-millennials-on-track-to-be-most-diverse-best-educated-generation-yet/>
- Galambos, N. L., Barker, E. T., & Almeida, D. M. (2003). Parents do matter: Trajectories of change in externalizing and internalizing problems in adolescence. *Child Development*, 74(2), 578–594. <https://doi.org/10.1111/1467-8624.7402017>
- Gallo, L. C., Roesch, S. C., Bravin, J. I., Savin, K. L., Perreira, K. M., Carnethon, M. R., Delamater, A. M., Salazar, C. R., Lopez-Gurrola, M., & Isasi, C. R. (2019). Socioeconomic adversity, social resources, and allostatic load among Hispanic/Latino youth: The study of Latino youth. *Psychosomatic Medicine*, 81(3), 305–312. <https://doi.org/10.1097/PSY.0000000000000668>

- Gard, A. M., Hein, T. C., Mitchell, C., Brooks-Gunn, J., McLanahan, S. S., Monk, C. S., & Hyde, L. W. (2021). Prospective longitudinal associations between harsh parenting and corticolimbic function during adolescence. *Development and Psychopathology*, 1–16. <https://doi.org/10.1017/S0954579420001583>
- Gard, A. M., McLoyd, V. C., Mitchell, C., & Hyde, L. W. (2020). Evaluation of a longitudinal family stress model in a population-based cohort. *Social Development*, 29(4), 1155–1175. <https://doi.org/10.1111/sode.12446>
- Gavidia-Payne, S., Denny, B., Davis, K., Francis, A., & Jackson, M. (2015). Parental resilience: A neglected construct in resilience research. *Clinical Psychologist*, 19(3), 111–121. <https://doi.org/10.1111/cp.12053>
- Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2007). Income is not enough: Incorporating material hardship into models of income associations with parenting and child development. *Child Development*, 78(1), 70–95. <https://doi.org/10.1111/j.1467-8624.2007.00986.x>
- Gestsdóttir, S., & Lerner, R. M. (2008). Positive development in adolescence: The development and role of intentional self-regulation. *Human Development*, 51(3), 202–224. <https://doi.org/10.1159/000135757>
- Giordano, G. N., Merlo, J., Ohlsson, H., Rosvall, M., & Lindström, M. (2013). Testing the association between social capital and health over time: A family-based design. *BMC Public Health*, 13(1), 1–9. <https://doi.org/10.1186/1471-2458-13-665>
- Goodman, E., McEwen, B. S., Dolan, L. M., Schafer-Kalkhoff, T., & Adler, N. E. (2005). Social disadvantage and adolescent stress. *Journal of Adolescent Health*, 37(6), 484–492. <https://doi.org/10.1016/j.jadohealth.2004.11.126>
- Gottlieb, G. (1996). Developmental psychobiological theory. In R. B. Cairns, G. H. Elder, Jr., & E. J. Costello (Eds.), *Developmental science* (pp. 63–77). Cambridge University Press. <https://doi.org/10.1017/CBO9780511571114.005>
- Gray, K. M., & Squeglia, L. M. (2018). Research review: What have we learned about adolescent substance use? *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 59(6), 618–627. <https://doi.org/10.1111/jcpp.12783>
- Griffin, K. W., Lowe, S. R., Acevedo, B. P., & Botvin, G. J. (2015). Affective self-regulation trajectories during secondary school predict substance use among urban minority young adults. *Journal of Child and Adolescent Substance Abuse*, 24(4), 228–234. <https://doi.org/10.1080/1067828X.2013.812530>
- Hackman, D. A., Gallop, R., Evans, G. W., & Farah, M. J. (2015). Socioeconomic status and executive function: Developmental trajectories and mediation. *Developmental Science*, 18(5), 686–702. <https://doi.org/10.1111/desc.12246>

- Hackman, D. A., O'Brien, J. R., & Zalewski, M. (2018). Enduring association between parenting and cortisol: A meta-analysis. *Child Development*, 89(5), 1485–1503. <https://doi.org/10.1111/cdev.13077>
- Halpern-Meekin, S., & Turney, K. (2016). Relationship churning and parenting stress among mothers and fathers. *Journal of Marriage and Family*, 78(3), 715–729. <https://doi.org/10.1111/jomf.12297>
- Hanson, M. D., & Chen, E. (2007). Socioeconomic status and health behaviors in adolescence: A review of the literature. *Journal of Behavioral Medicine*, 30(3), 263–285. <https://doi.org/10.1007/s10865-007-9098-3>
- Hardaway, C. R., & Cornelius, M. D. (2014). Economic hardship and adolescent problem drinking: Family processes as mediating influences. *Journal of Youth and Adolescence*, 43(7), 1191–1202. <https://doi.org/10.1007/s10964-013-0063-x>
- Hayes, A. F. (2015). An index and test of linear moderated mediation. *Multivariate Behavioral Research*, 50(1), 1–22. <https://doi.org/10.1080/00273171.2014.962683>
- Hayes, A. F., & Rockwood, N. J. (2020). Conditional process analysis: Concepts, computation, and advances in the modeling of the contingencies of mechanisms. *American Behavioral Scientist*, 64(1), 19–54. <https://doi.org/10.1177/0002764219859633>
- Haynie, D. L., & South, S. J. (2005). Residential mobility and adolescent violence. *Social Forces*, 84(1), 361–374. <https://doi.org/10.1353/sof.2005.0104>
- Heard, H. E. (2007). The family structure trajectory and adolescent school performance: Differential effects by race and ethnicity. *Journal of Family Issues*, 28(3), 319–354. <https://doi.org/10.1177/0192513X06296307>
- Helms, H. M., Supple, A. J., Su, J., Rodriguez, Y., Cavanaugh, A. M., & Hengstebeck, N. D. (2014). Economic pressure, cultural adaptation stress, and marital quality among Mexican-origin couples. *Journal of Family Psychology*, 28(1), 77–87. <https://doi.org/10.1037/a0035738>
- Hill, T. D., Burdette, A. M., Regnerus, M., & Angel, R. J. (2008). Religious involvement and attitudes toward parenting among low-income urban women. *Journal of Family Issues*, 29(7), 882–900. <https://doi.org/10.1177/0192513X07311949>
- Hoff, E., Laursen, B., & Bridges, K. (2012). Measurement and model building in studying the influence of socioeconomic status on child development. In L. C. Mayes & M. Lewis (Eds.), *The Cambridge handbook of environment in human development* (Issue 2012, pp. 590–606). Cambridge University Press. <https://doi.org/10.1017/cbo9781139016827.033>
- Horowitz, J., Graf, N., & Livingston, G. (2019). *The landscape of marriage and cohabitation in the U.S.* Pew Research Center. <https://www.pewresearch.org/social-trends/2019/11/06/the-landscape-of-marriage-and-cohabitation-in-the-u-s/>

- Hou, Y., Kim, S. Y., & Wang, Y. (2016). Parental acculturative stressors and adolescent adjustment through interparental and parent–child relationships in Chinese American families. *Journal of Youth and Adolescence*, 45(7), 1466–1481. <https://doi.org/10.1007/s10964-016-0441-2>
- Huang, X., & King, C. (2018). Food insecurity transitions and housing hardships: Are immigrant families more vulnerable? *Journal of Urban Affairs*, 40(8), 1146–1160. <https://doi.org/10.1080/07352166.2018.1468222>
- Humensky, J. L. (2010). Are adolescents with high socioeconomic status more likely to engage in alcohol and illicit drug use in early adulthood? *Substance Abuse Treatment, Prevention, and Policy*, 5(1), 1–10. <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed11&NEWS=N&AN=20687935>
- Hunter, A. G., Chipenda-Dansokho, S., Tarver, S. Z., Herring, M., & Fletcher, A. (2019). Social capital, parenting, and African American families. *Journal of Child and Family Studies*, 28(2), 547–559. <https://doi.org/10.1007/s10826-018-1282-2>
- Hyde, L. W., Gard, A. M., Tomlinson, R. C., Burt, S. A., Mitchell, C., & Monk, C. S. (2020). An ecological approach to understanding the developing brain: Examples linking poverty, parenting, neighborhoods, and the brain. *American Psychologist*, 75(9), 1245–1259. <https://doi.org/10.1037/amp0000741>
- Iceland, J., & Bauman, K. J. (2007). Income poverty and material hardship: How strong is the association? *Journal of Socio-Economics*, 36(3), 376–396. <https://doi.org/10.1016/j.socec.2006.12.003>
- Irons, D. E., Iacono, W. G., & McGue, M. (2015). Tests of the effects of adolescent early alcohol exposures on adult outcomes. *Addiction*, 110(2), 269–278. <https://doi.org/10.1111/add.12747>
- Iruka, I. U., LaForett, D. R., & Odom, E. C. (2012). Examining the validity of the family investment and stress models and relationship to children’s school readiness across five cultural groups. *Journal of Family Psychology*, 26(3), 359–370. <https://doi.org/10.1037/a0028290>
- Jackson, D. L., Gillaspy, J. A., Jr., & Purc-Stephenson, R. (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *Psychological Methods*, 14(1), 6–23. <https://doi.org/10.1037/a0014694>
- James, S. A., Strogatz, D. S., Wing, S. B., & Ramsey, D. L. (1987). Socioeconomic status, John Henryism, and hypertension in Blacks and Whites. *American Journal of Epidemiology*, 126(4), 664–673. <https://doi.org/10.1093/oxfordjournals.aje.a114706>

- January, S. A. A., Mason, W. A., Savolainen, J., Solomon, S., Chmelka, M. B., Miettunen, J., Veijola, J., Moilanen, I., Taanila, A., & Järvelin, M. R. (2017). Longitudinal pathways from cumulative contextual risk at birth to school functioning in adolescence: Analysis of mediation effects and gender moderation. *Journal of Youth and Adolescence*, 46(1), 180–196. <https://doi.org/10.1007/s10964-016-0560-9>
- Jensen, S. K. G., Berens, A. E., & Nelson, C. A. (2017). Effects of poverty on interacting biological systems underlying child development. *The Lancet Child and Adolescent Health*, 1(3), 225–239. [https://doi.org/10.1016/S2352-4642\(17\)30024-X](https://doi.org/10.1016/S2352-4642(17)30024-X)
- Jeon, S., & Neppl, T. K. (2016). Intergenerational continuity in economic hardship, parental positivity, and positive parenting: The association with child behavior. *Journal of Family Psychology*, 30(1), 22–32. <https://doi.org/10.1037/fam0000151>
- Jeon, S., & Neppl, T. K. (2019). Economic pressure, parent positivity, positive parenting, and child social competence. *Journal of Child and Family Studies*, 28(5), 1402–1412. <https://doi.org/10.1007/s10826-019-01372-1>
- Jocson, R. M., & McLoyd, V. C. (2015). Neighborhood and housing disorder, parenting, and youth adjustment in low-income urban families. *American Journal of Community Psychology*, 55(3–4), 304–313. <https://doi.org/10.1007/s10464-015-9710-6>
- Johnson, S. B., Riis, J. L., & Noble, K. G. (2016). State of the art review: Poverty and the developing brain. *Pediatrics*, 137(4). <https://doi.org/10.1542/peds.2015-3075>
- Johnston, L. D., Miech, R. A., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., & Patrick, M. E. (2019). Monitoring the Future: National survey results on drug use 1975-2018. 2018 Overview: Key findings on adolescent drug use. *The National Institute on Drug Abuse at The National Institutes of Health*, 1–104.
- Kalil, A., & Ryan, R. M. (2010). Mothers' economic conditions and sources of support in fragile families. *Future of Children*, 20(2), 39–69. <https://doi.org/10.1353/foc.2010.0009>
- Kang, J. (2013). Instrumental social support, material hardship, personal control and neglectful parenting. *Children and Youth Services Review*, 35(9), 1366–1373. <https://doi.org/10.1016/j.childyouth.2013.05.009>
- Karpman, M., Gonzalez, D., Zuckerman, S., & Adams, G. (2018). *What explains the widespread material hardship among low-income families with children?* Urban Institute. <https://www.urban.org/research/publication/what-explains-widespread-material-hardship-among-low-income-families-children>
- Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review*, 30(4), 865–878. <https://doi.org/10.1016/j.cpr.2010.03.001>

- Kawachi, I. (1999). Social capital and community effects on population and individual health. *Annals of the New York Academy of Sciences*, 896(1), 120–130. <https://doi.org/10.1111/j.1749-6632.1999.tb08110.x>
- Kawachi, I. (2010). The relationship between health assets, social capital and cohesive communities. In A. Morgan, M. Davies, & E. Ziglio (Eds.), *Health assets in a global context: Theory, methods, and action* (pp. 167–179). Springer, New York. https://doi.org/10.1007/978-1-4419-5921-8_9
- Kawachi, I., & Berkman, L. (2000). Social cohesion, social capital, and health. *Social Epidemiology*, 174(7), 290–319.
- Kelly, A. B., Evans-Whipp, T. J., Smith, R., Chan, G. C. K., Toumbourou, J. W., Patton, G. C., Hemphill, S. A., Hall, W. D., & Catalano, R. F. (2015). A longitudinal study of the association of adolescent polydrug use, alcohol use and high school non-completion. *Addiction*, 110(4), 627–635. <https://doi.org/10.1111/add.12829>
- Kenney, M. K. (2012). Child, family, and neighborhood associations with parent and peer interactive play during early childhood. *Maternal and Child Health Journal*, 16(1), 88–101. <https://doi.org/10.1007/s10995-012-0998-7>
- Kern, M. L., Benson, L., Steinberg, E. A., & Steinberg, L. (2016). The EPOCH measure of adolescent well-being. *Psychological Assessment*, 28(5), 586–597. <https://doi.org/10.1037/pas0000201>
- Kessler, R. C., Andrews, G., Mroczek, D., Ustun, B., & Wittchen, H.-U. (1998). The World Health Organization Composite International Diagnostic Interview short-form (CIDI-SF). *International Journal of Methods in Psychiatric Research*, 7(4), 171–185. <https://doi.org/10.1002/mpr.47>
- Kiernan, K. E., & Mensah, F. K. (2011). Poverty, family resources and children's early educational attainment: The mediating role of parenting. *British Educational Research Journal*, 37(2), 317–336. <https://doi.org/10.1080/01411921003596911>
- Kim, B., & Maguire-Jack, K. (2015). Community interaction and child maltreatment. *Child Abuse and Neglect*, 41, 146–157. <https://doi.org/10.1016/j.chiabu.2013.07.020>
- Kim, P., Evans, G. W., Chen, E., Miller, G., & Seeman, T. (2018). How socioeconomic disadvantages get under the skin and into the brain to influence health development across the lifespan. In N. Halfon, C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of life course health development* (pp. 463–497). Springer International Publishing. https://doi.org/10.1007/978-3-319-47143-3_19
- Kim-Cohen, J., Moffitt, T. E., Caspi, A., & Taylor, A. (2004). Genetic and environmental processes in young children's resilience and vulnerability to socioeconomic deprivation. *Child Development*, 75(3), 651–668. <https://doi.org/10.1111/j.1467-8624.2004.00699.x>

- King, K. M., Lengua, L. J., & Monahan, K. C. (2013). Individual differences in the development of self-regulation during pre-adolescence: Connections to context and adjustment. *Journal of Abnormal Child Psychology*, 41(1), 57–69. <https://doi.org/10.1007/s10802-012-9665-0>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.
- Koball, H., Moore, A., Hernandez, J. (2020). *Basic facts about low-income children: Children under 18 years, 2019*. National Center for Children in Poverty. <https://www.nccp.org/publication/basic-facts-about-low-income-children-children-under-18-years-2019/>
- Krishnakumar, A., Narine, L., Roopnarine, J. L., & Logie, C. (2014). Multilevel and cross-level effects of neighborhood and family influences on children’s behavioral outcomes in Trinidad and Tobago: The intervening role of parental control. *Journal of Abnormal Child Psychology*, 42(6), 1057–1068. <https://doi.org/10.1007/s10802-014-9852-2>
- Kuhn, C. (2015). Emergence of sex differences in the development of substance use and abuse during adolescence. *Pharmacology and Therapeutics*, 153, 55–78. <https://doi.org/10.1016/j.pharmthera.2015.06.003>
- Kumpfer, K., Magalhães, C., & Xie, J. (2017). Cultural adaptation and implementation of family evidence-based interventions with diverse populations. *Prevention Science*, 18(6), 649–659. <https://doi.org/10.1007/s11121-016-0719-3>
- Kunitz, S. J. (2004). Social capital and health. *British Medical Bulletin*, 69, 61–73. <https://doi.org/10.1093/bmb/ldh015>
- Kwon, J. A., & Wickrama, K. A. S. (2014). Linking family economic pressure and supportive parenting to adolescent health behaviors: Two developmental pathways leading to health promoting and health risk behaviors. *Journal of Youth and Adolescence*, 43(7), 1176–1190. <https://doi.org/10.1007/s10964-013-0060-0>
- Lackner, C. L., Santesso, D. L., Dywan, J., O’Leary, D. D., Wade, T. J., & Segalowitz, S. J. (2018). Adverse childhood experiences are associated with self-regulation and the magnitude of the error-related negativity difference. *Biological Psychology*, 132, 244–251. <https://doi.org/10.1016/j.biopsycho.2018.01.006>
- Lakind, D., & Atkins, M. S. (2018). Promoting positive parenting for families in poverty: New directions for improved reach and engagement. *Children and Youth Services Review*, 89, 34–42. <https://doi.org/10.1016/j.childyouth.2018.04.019>
- Lamis, D. A., Wilson, C. K., Tarantino, N., Lansford, J. E., & Kaslow, N. J. (2014). Neighborhood disorder, spiritual well-being, and parenting stress in African American women. *Journal of Family Psychology*, 28(6), 769–778. <https://doi.org/10.1037/a0036373>

- Landers-Potts, M. A., Wickrama, K. A. S., Simons, L. G., Cutrona, C., Gibbons, F. X., Simons, R. L., & Conger, R. (2015). An extension and moderational analysis of the Family Stress Model focusing on African American adolescents. *Family Relations*, 64(2), 233–248. <https://doi.org/10.1111/fare.12117>
- Landry, S. H., Smith, K. E., Swank, P. R., & Guttentag, C. (2008). A responsive parenting intervention: The optimal timing across early childhood for impacting maternal behaviors and child outcomes. *Developmental Psychology*, 44(5), 1335–1353. <https://doi.org/10.1037/a0013030>
- Lawson, G. M., Hook, C. J., & Farah, M. J. (2018). A meta-analysis of the relationship between socioeconomic status and executive function performance among children. *Developmental Science*, 21(2). <https://doi.org/10.1111/desc.12529>
- Lee, C.-Y. S., Anderson, J. R., Horowitz, J. L., & August, G. J. (2009). Family income and parenting: The role of parental depression and social support. *Family Relations*, 58(4), 417–430. <https://doi.org/10.1111/j.1741-3729.2009.00563.x>
- Lee, D., & Jackson, M. (2017). The simultaneous effects of socioeconomic disadvantage and child health on children's cognitive development. *Demography*, 54(5), 1845–1871. <https://doi.org/10.1007/s13524-017-0605-z>
- Lee, D., & McLanahan, S. (2015). Family structure transitions and child development: Instability, selection, and population heterogeneity. *American Sociological Review*, 80(4), 738–763. <https://doi.org/10.1177/0003122415592129>
- Lee, J. O., Cho, J., Yoon, Y., Bello, M. S., Khoddam, R., & Leventhal, A. M. (2018). Developmental pathways from parental socioeconomic status to adolescent substance use: Alternative and complementary reinforcement. *Journal of Youth and Adolescence*, 47(2), 334–348. <https://doi.org/10.1007/s10964-017-0790-5>
- Lee, L. C., Halpern, C. T., Hertz-Picciotto, I., Martin, S. L., & Suchindran, C. M. (2006). Child care and social support modify the association between maternal depressive symptoms and early childhood behaviour problems: A US national study. *Journal of Epidemiology and Community Health*, 60(4), 305–310. <https://doi.org/10.1136/jech.2005.040956>
- Lee, T. K., Wickrama, K. A. S., & Simons, L. G. (2013). Chronic family economic hardship, family processes and progression of mental and physical health symptoms in adolescence. *Journal of Youth and Adolescence*, 42(6), 821–836. <https://doi.org/10.1007/s10964-012-9808-1>
- Leidy, M. S., Guerra, N. G., & Toro, R. I. (2010). Positive parenting, family cohesion, and child social competence among immigrant Latino families. *Journal of Family Psychology*, 24(3), 252–260. <https://doi.org/10.1037/a0019407>
- Lengua, L. J. (2006). Growth in temperament and parenting as predictors of adjustment during children's transition to adolescence. *Developmental Psychology*, 42(5), 819–832. <https://doi.org/10.1037/0012-1649.42.5.819>

- Lengua, L. J., Honorado, E., & Bush, N. R. (2007). Contextual risk and parenting as predictors of effortful control and social competence in preschool children. *Journal of Applied Developmental Psychology*, 28(1), 40–55. <https://doi.org/10.1016/j.appdev.2006.10.001>
- Lerner, R. M. (2012). What are SES effects effects of? A developmental systems perspective. In M. H. Bornstein & R. H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 231–255). Routledge.
- Lerner, R. M., Agans, J. P., Arbeit, M. R., Chase, P. A., Weiner, M. B., Schmid, K. L., & Warren, A. E. A. (2013). Resilience and positive youth development: A relational developmental systems model. In *Handbook of resilience in children* (pp. 293–308). Springer US. https://doi.org/10.1007/978-1-4614-3661-4_17
- Lerner, R. M., Brindis, C. D., Batanova, M., & Blum, R. Wm. (2018). Adolescent health development: A relational developmental systems perspective. In N. Halfon, C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of life course health development* (pp. 109–121). Springer International Publishing. https://doi.org/10.1007/978-3-319-47143-3_6
- Lerner, R. M., & Castellino, D. R. (2002). Contemporary developmental theory and adolescence: Developmental systems and applied developmental science. *Journal of Adolescent Health*, 31(Suppl. 6), 122–135. [https://doi.org/10.1016/S1054-139X\(02\)00495-0](https://doi.org/10.1016/S1054-139X(02)00495-0)
- Letourneau, N. L., Duffett-Leger, L., Levac, L., Watson, B., & Young-Morris, C. (2013). Socioeconomic status and child development: A meta-analysis. *Journal of Emotional and Behavioral Disorders*, 21(3), 211–224. <https://doi.org/10.1177/1063426611421007>
- Leventhal, T., & Brooks-Gunn, J. (2012). Moving on up: Neighborhood effects on children and families. In M. H. Bornstein & R. H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 189–211). Routledge.
- Lipina, S., & Evers, K. (2017). Neuroscience of childhood poverty: Evidence of impacts and mechanisms as vehicles of dialog with ethics. *Frontiers in Psychology*, 8, 1–13. <https://doi.org/10.3389/fpsyg.2017.00061>
- Lipina, S., Segretin, S., Hermida, J., Prats, L., Fracchia, C., Camelo, J. L., & Colombo, J. (2013). Linking childhood poverty and cognition: Environmental mediators of non-verbal executive control in an Argentine sample. *Developmental Science*, 16(5), 697–707. <https://doi.org/10.1111/desc.12080>
- Livingston, G. *The changing profile of unmarried parents*. Pew Research Center. <https://www.pewresearch.org/social-trends/2018/04/25/the-changing-profile-of-unmarried-parents/>
- Luby, J. L. (2020). Editorial: The primacy of parenting. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 61(4), 399–400. <https://doi.org/10.1111/jcpp.13236>

- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71(3), 543–562. <https://doi.org/10.1111/1467-8624.00164>
- Luthar, S. S., & Ciciolla, L. (2015). Who mothers mommy? Factors that contribute to mothers' well-being. *Developmental Psychology*, 51(12), 1812–1823. <https://doi.org/10.1037/dev0000051>
- Luthar, S. S., Grossman, E. J., & Small, P. J. (2015). Resilience and adversity. In M. E. Lamb & R. M. Lerner (Eds.), *Handbook of child psychology and developmental science: Socioemotional processes* (pp. 247–286). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781118963418.childpsy307>
- Luthar, S. S., & Eisenberg, N. (2017). Resilient adaptation among at-risk children: Harnessing science toward maximizing salutary environments. *Child Development*, 88(2), 337–349. <https://doi.org/10.1111/cdev.12737>
- Ma, J., & Klein, S. (2018). Does race/ethnicity moderate the associations between neighborhood and parenting processes on early behavior problems? *Journal of Child and Family Studies*, 27(11), 3717–3729. <https://doi.org/10.1007/s10826-018-1200-7>
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. H. Mussen, & E. M. Hetherington (Eds.), *Handbook of child psychology: Socialization, personality, and social development* (Vol. 4, pp. 1-101). New York: Wiley.
- Maguire-Jack, K., & Wang, X. (2016). Pathways from neighborhood to neglect: The mediating effects of social support and parenting stress. *Children and Youth Services Review*, 66, 28–34. <https://doi.org/10.1016/j.childyouth.2016.04.017>
- Mahrer, N. E., Holly, L. E., Luecken, L. J., Wolchik, S. A., & Fabricius, W. (2019). Parenting style, familism, and youth adjustment in Mexican American and European American families. *Journal of Cross-Cultural Psychology*, 50(5), 659–675. <https://doi.org/10.1177/0022022119839153>
- Malmberg, L.-E., & Flouri, E. (2011). The comparison and interdependence of maternal and paternal influences on young children's behavior and resilience. *Journal of Clinical Child & Adolescent Psychology*, 40(3), 434–444. <https://doi.org/10.1080/15374416.2011.563469>
- Manning, W. D. (2015). Cohabitation and child wellbeing. *The Future of Children*, 25(2), 51–66. <https://doi.org/10.1353/foc.2015.0012>
- Manning, W. D., & Brown, S. (2006). Children's economic well-being in married and cohabiting parent families. *Journal of Marriage and Family*, 68(2), 345–362. <https://doi.org/10.1111/j.1741-3737.2006.00257.x>

- Manuel, J. I., Martinson, M. L., Bledsoe-Mansori, S. E., & Bellamy, J. L. (2012). The influence of stress and social support on depressive symptoms in mothers with young children. *Social Science and Medicine*, 75(11), 2013–2020. <https://doi.org/10.1016/j.socscimed.2012.07.034>
- Marceau, K., Horvath, G., Loviska, A. M., & Knopik, V. S. (2021). Developmental cascades from polygenic and prenatal substance use to adolescent substance use: Leveraging severity and directionality of externalizing and internalizing problems to understand pubertal and harsh discipline-related risk. *Behavior Genetics*, 51(5), 559–579. <https://doi.org/10.1007/s10519-021-10068-6>
- Marceau, K., Nair, N., Rogers, M. L., & Jackson, K. M. (2020). Lability in parent- and child-based sources of parental monitoring Is differentially associated with adolescent substance use. *Prevention Science*, 21(4), 568–579. <https://doi.org/10.1007/s11121-020-01094-7>
- Marsh, R., Maia, T. V., & Peterson, B. S. (2009). Functional disturbances within frontostriatal circuits across multiple childhood psychopathologies. *American Journal of Psychiatry*, 166(6), 664–674. <https://doi.org/10.1176/appi.ajp.2009.08091354>
- Martin, C. C. (2019). High socioeconomic status predicts substance use and alcohol consumption in U.S. undergraduates. *Substance Use and Misuse*, 54(6), 1035–1043. <https://doi.org/10.1080/10826084.2018.1559193>
- Martin, M. J., Conger, R. D., & Robins, R. W. (2019). Family stress processes and drug and alcohol use by Mexican American adolescents. *Developmental Psychology*, 55(1), 170–183. <https://doi.org/10.1037/dev0000629>
- Masarik, A. S., & Conger, R. D. (2017). Stress and child development: A review of the Family Stress Model. *Current Opinion in Psychology*, 13, 85–90. <https://doi.org/10.1016/j.copsyc.2016.05.008>
- Mason, W. A., January, S. A. A., Chmelka, M. B., Parra, G. R., Savolainen, J., Miettunen, J., Järvelin, M. R., Taanila, A., & Moilanen, I. (2016). Cumulative contextual risk at birth in relation to adolescent substance use, conduct problems, and risky sex: General and specific predictive associations in a Finnish birth cohort. *Addictive Behaviors*, 58, 161–166. <https://doi.org/10.1016/j.addbeh.2016.02.031>
- Masten, A. S. (2014a). Global perspectives on resilience in children and youth. *Child Development*, 85(1) 6–20. <https://doi.org/10.1111/cdev.12205>
- Masten, A. S. (2014b). Invited commentary: Resilience and positive youth development frameworks in developmental science. *Journal of Youth and Adolescence*, 43(6), 1018–1024. <https://doi.org/10.1007/s10964-014-0118-7>
- Masten, A. S. (2015). *Ordinary magic: Resilience in development*. Guilford Publications.

- Masten, A. S. (2018). Resilience theory and research on children and families: Past, present, and promise. *Journal of Family Theory and Review*, 10(1), 12–31. <https://doi.org/10.1111/jftr.12255>
- Masten, A. S., & Barnes, A. (2018). Resilience in children: Developmental perspectives. *Children*, 5(7), 98. <https://doi.org/10.3390/children5070098>
- Masten, A. S., & Monn, A. R. (2015). Child and family resilience: A call for integrated science, practice, and professional training. *Family Relations*, 64(1), 5–21. <https://doi.org/10.1111/fare.12103>
- Masten, A. S., & Palmer, A. R. (2019). Parenting to promote resilience in children. In M.H. Bornstein (Ed.), *Handbook of parenting: The practice of parenting* (3rd ed., Vol. 5, pp. 156–188). Routledge. <https://doi.org/10.4324/9780429401695-6>
- Mather, M. (2010). *U.S. children in single-mother families*. Population Reference Bureau. <https://www.prb.org/resources/u-s-children-in-single-mother-families/>
- Mayer, S. E., & Jencks, C. (1989). Poverty and the distribution of material hardship. *The Journal of Human Resources*, 24(1), 88–114. <https://doi.org/10.2307/145934>
- McAuley, C., & Layte, R. (2012). Exploring the relative influence of family stressors and socio-economic context on children's happiness and well-being. *Child Indicators Research*, 5(3), 523–545. <https://doi.org/10.1007/s12187-012-9153-7>
- McClelland, M., Geldhof, J., Morrison, F., Gestsdóttir, S., Cameron, C., Bowers, E., Duckworth, A., Little, T., & Grammer, J. (2018). Self-regulation. In N. Halfon, C. B. Forrest, R. M. Lerner, & E. M. Faustman (Eds.), *Handbook of life course health development* (pp. 275–298). Springer International Publishing. https://doi.org/10.1007/978-3-319-47143-3_12
- McCloskey, R. J., & Maguire-Jack, K. (2021). Community participation and neighborhood factors associated with physical and mental health among low-income mothers in the United States. *Community Development*, 1–13. <https://doi.org/10.1080/15575330.2021.1876746>
- McCloskey, R. J., & Pei, F. (2019). The role of parenting stress in mediating the relationship between neighborhood social cohesion and depression and anxiety among mothers of young children in fragile families. *Journal of Community Psychology*, 47(4), 869–881. <https://doi.org/10.1002/jcop.22160>
- McConnell, D., Breitkreuz, R., & Savage, A. (2011). From financial hardship to child difficulties: Main and moderating effects of perceived social support. *Child: Care, Health and Development*, 37(5), 679–691. <https://doi.org/10.1111/j.1365-2214.2010.01185.x>
- McFadyen-Ketchum, L. S., Hurwich-Reiss, E., Stiles, A. A., Mendoza, M. M., Badanes, L. S., Dmitrieva, J., & Watamura, S. E. (2016). Self-regulation and economic stress in children of Hispanic immigrants and their peers: Better regulation at a cost? *Early Education and Development*, 27(7), 914–931. <https://doi.org/10.1080/10409289.2015.1036345>

- McLanahan, S. (2009). Fragile families and the reproduction of poverty. *Annals of the American Academy of Political and Social Science*, 621(1), 111–131.
<https://doi.org/10.1177/0002716208324862>
- McLanahan, S. (2011). Chapter five. Family instability and complexity after a nonmarital birth: Outcomes for children in fragile families. In M. Carlson & P. England (Eds.), *Social class and changing families in an unequal America* (pp. 108-133). Redwood City: Stanford University Press. <https://doi.org/10.1515/9780804779081-008>
- McLanahan, S., Garfinkel, I., Reichman, N. E., & Teitler, J. O. (2001). *Unwed parents or fragile families? Implications for welfare and child support policy*. Center for Research on Child Wellbeing Working Paper. <http://ohiofamilyrights.com/Reports/Reports/Special-Reports-Page-4/UNWED-PARENTS-OR-FRAGILE-FAMILIES-IMPLICATIONS-FOR-WELFARE-AND-CHILD-SUPPORT-POLICY.pdf>
- McLanahan, S., & Jacobsen, W. (2015). Diverging destinies revisited. In P. R. Amato, A. Booth, S. M. McHale, & J. Van Hook (Eds.), *Families in an era of increasing inequality: Diverging destinies* (Vol. 5, pp. 3–23). Springer International Publishing.
https://doi.org/10.1007/978-3-319-08308-7_1
- McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: Psychological distress, parenting, and socioemotional development. *Child Development*, 61(2), 311–346.
- McLoyd, V. C., Kaplan, R., Purtell, K. M., Bagley, E., Hardaway, C. R., & Smalls, C. (2009). Poverty and socioeconomic disadvantage in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology: Contextual influences on adolescent development* (3rd ed, Vol. 2, pp. 444–491). John Wiley & Sons, Inc.
<https://doi.org/10.1002/9780470479193.adlpsy002014>
- McLoyd, V. C., Mistry, R. S., & Hardaway, C. R. (2014). Poverty and children's development: Familial processes as mediating influences. In E. T. Gershoff, R. S. Mistry, D. A. Crosby (Eds.), *Societal contexts of child development: Pathways of influence and implications for practice and policy* (pp. 109–124). Oxford University Press.
- McLoyd, V. C., Toyokawa, T., & Kaplan, R. (2008). Work demands, work-family conflict, and child adjustment in African American families: The mediating role of family routines. *Journal of Family Issues*, 29(10) 1247–1267. <https://doi.org/10.1177/0192513X08320189>
- Meadows, S. O., McLanahan, S., & Knab, J. T. (2009). *Economic trajectories in non-traditional families with children*. RAND Corporation.
https://www.rand.org/pubs/working_papers/WR701.html
- Melotti, R., Heron, J., Hickman, M., Macleod, J., Araya, R., & Lewis, G. (2011). Adolescent alcohol and tobacco use and early socioeconomic position: The ALSPAC birth cohort. *Pediatrics*, 127(4) e948–e955. <https://doi.org/10.1542/peds.2009-3450>

- Mistry, R. S., Vandewater, E. A., Huston, A. C., & McLoyd, V. C. (2002). Economic well-being and children's social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development*, 73(3), 935–951. <https://doi.org/10.1111/1467-8624.00448>
- Mok, P. L. H., Webb, R. T., Appleby, L., & Pedersen, C. B. (2016). Full spectrum of mental disorders linked with childhood residential mobility. *Journal of Psychiatric Research*, 78, 57–64. <https://doi.org/10.1016/j.jpsychires.2016.03.011>
- Monahan, K. C., Guyer, A. E., Silk, J., Fitzwater, T., & Steinberg, L. (2016). Integration of developmental neuroscience and contextual approaches to the study of adolescent psychopathology. In D. Cicchetti (Ed.), *Developmental psychopathology: Developmental neuroscience* (pp. 720–765). John Wiley & Sons, Inc. <https://doi.org/10.1002/9781119125556.devpsy219>
- Morrish, L., Rickard, N., Chin, T. C., & Vella-Brodrick, D. A. (2018). Emotion regulation in adolescent well-being and positive education. *Journal of Happiness Studies*, 19(5), 1543–1564. <https://doi.org/10.1007/s10902-017-9881-y>
- Mueller, M. K., Phelps, E., Bowers, E. P., Agans, J. P., Urban, J. B., & Lerner, R. M. (2011). Youth development program participation and intentional self-regulation skills: Contextual and individual bases of pathways to positive youth development. *Journal of Adolescence*, 34(6), 1115–1125. <https://doi.org/10.1016/j.adolescence.2011.07.010>
- Murry, V. M., Berkel, C., Gaylord-Harden, N. K., Copeland-Linder, N., & Nation, M. (2011). Neighborhood poverty and adolescent development. *Journal of Research on Adolescence*, 21(1), 114–128. <https://doi.org/10.1111/j.1532-7795.2010.00718.x>
- Murry, V. M., Bynum, M. S., Brody, G. H., Willert, A., & Stephens, D. (2001). African American single mothers and children in context: A review of studies on risk and resilience. *Clinical Child and Family Psychology Review*, 4(2), 133–155. <https://doi.org/10.1023/A:1011381114782>
- Muthén, L.K. and Muthén, B.O. (1998-2017). *Mplus user's guide* (8th Edition). Los Angeles, CA: Muthén & Muthén
- Nair, N., Taylor, Z. E., Evich, C. D., & Jones, B. L. (2020). Relations of positive parenting, effortful control, and resilience in rural Midwestern Latinx early adolescents. *Children and Youth Services Review*, 113, 105003. <https://doi.org/10.1016/j.childyouth.2020.105003>
- National Institute for Child Health and Human Development. (2005). Duration and developmental timing of poverty and children's cognitive and social development from birth through third grade. *Child Development*, 76(4), 795–810. <https://doi.org/10.1111/j.1467-8624.2005.00878.x>

- Neckerman, K. M., Garfinkel, I., Teitler, J. O., Waldfogel, J., & Wimer, C. (2016). Beyond income poverty: Measuring disadvantage in terms of material hardship and health. *Academic Pediatrics, 16*(3), S52–S59. <https://doi.org/10.1016/j.acap.2016.01.015>
- Neppl, T. K., Jeon, S., Schofield, T. J., & Donnellan, M. B. (2015). The impact of economic pressure on parent positivity, parenting, and adolescent positivity into emerging adulthood. *Family Relations, 64*(1), 80–92. <https://doi.org/10.1111/fare.12098>
- Neppl, T. K., Senia, J. M., & Donnellan, M. B. (2016). Effects of economic hardship: Testing the Family Stress Model over time. *Journal of Family Psychology, 30*(1), 12–21. <https://doi.org/10.1037/fam0000168>
- Newland, R. P., Crnic, K. A., Cox, M. J., & Mills-Koonce, W. R. (2013). The family model stress and maternal psychological symptoms: Mediated pathways from economic hardship to parenting. *Journal of Family Psychology, 27*(1), 96–105. <https://doi.org/10.1037/a0031112>
- Nievar, M. A., Moske, A. K., Johnson, D. J., & Chen, Q. (2014). Parenting practices in preschool leading to later cognitive competence: A family stress model. *Early Education and Development, 25*(3), 318–337. <https://doi.org/10.1080/10409289.2013.788426>
- Nigg, J. T. (2017). Annual Research Review: On the relations among self-regulation, self-control, executive functioning, effortful control, cognitive control, impulsivity, risk-taking, and inhibition for developmental psychopathology. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 58*(4), 361–383. <https://doi.org/10.1111/jcpp.12675>
- Noble, K. G., McCandliss, B. D., & Farah, M. J. (2007). Socioeconomic gradients predict individual differences in neurocognitive abilities. *Developmental Science, 10*(4), 464–480. <https://doi.org/10.1111/j.1467-7687.2007.00600.x>
- Nomaguchi, K., & House, A. N. (2013). Racial-ethnic disparities in maternal parenting stress: The role of structural disadvantages and parenting values. *Journal of Health and Social Behavior, 54*(3), 386–404. <https://doi.org/10.1177/0022146513498511>
- O'Connor, M., Chong, S., Hutchinson, D., Sanson, A., McIntosh, J., Olsson, C. A., & Goldfeld, S. (2019). Socioeconomic disadvantage in infancy and academic and self-regulation outcomes. *Pediatrics, 143*(5). <https://doi.org/10.1542/peds.2018-2640>
- O'Neal, C. W., Arnold, A. L., Lucier-Greer, M., Wickrama, K. A. S., & Bryant, C. M. (2015). Economic pressure and health and weight management behaviors in African American couples: A family stress perspective. *Journal of Health Psychology, 20*(5), 625–637. <https://doi.org/10.1177/1359105315579797>
- Palacios-Barrios, E. E., & Hanson, J. L. (2019). Poverty and self-regulation: Connecting psychosocial processes, neurobiology, and the risk for psychopathology. *Comprehensive Psychiatry, 90*, 52–64. <https://doi.org/10.1016/j.comppsy.2018.12.012>

- Pampel, F. C., Krueger, P. M., & Denney, J. T. (2010). Socioeconomic disparities in health behaviors. *Annual Review of Sociology*, 36(1), 349–370. <https://doi.org/10.1146/annurev.soc.012809.102529>
- Panter-Brick, C., & Leckman, J. F. (2013). Editorial commentary: Resilience in child development - Interconnected pathways to wellbeing. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 54(4), 333–336. <https://doi.org/10.1111/jcpp.12057>
- Parke, R. D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., & Widaman, K. F. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development*, 75(6), 1632–1656. <https://doi.org/10.1111/j.1467-8624.2004.00807.x>
- Pearl, A. M., French, B. F., Dumas, J. E., Moreland, A. D., & Prinz, R. (2014). Bidirectional effects of parenting quality and child externalizing behavior in predominantly single parent, under-resourced African American families. *Journal of Child and Family Studies*, 23(2), 177–188. <https://doi.org/10.1007/s10826-012-9692-z>
- Percheski, C. (2018). Marriage, family structure, and maternal employment trajectories. *Social Forces*, 96(3), 1211–1242. <https://doi.org/10.1093/sf/sox094>
- Piehler, T. F., Véronneau, M. H., & Dishion, T. J. (2012). Substance use progression from adolescence to early adulthood: Effortful control in the context of friendship influence and early-onset use. *Journal of Abnormal Child Psychology*, 40(7), 1045–1058. <https://doi.org/10.1007/s10802-012-9626-7>
- Piko, B. F., & Fitzpatrick, K. M. (2007). Socioeconomic status, psychosocial health and health behaviours among Hungarian adolescents. *The European Journal of Public Health*, 17(4), 353–360. <https://doi.org/10.1093/eurpub/ckl257>
- Pilkauskas, N. V., Garfinkel, I., & McLanahan, S. S. (2014). The prevalence and economic value of doubling up. *Demography*, 51(5), 1667–1676. <https://doi.org/10.1007/s13524-014-0327-4>
- Pinquart, M. (2017a). Associations of parenting dimensions and styles with externalizing problems of children and adolescents: An updated meta-analysis. *Developmental Psychology*, 53(5), 873–932. <https://doi.org/10.1037/dev0000295>
- Pinquart, M. (2017b). Associations of parenting dimensions and styles with internalizing symptoms in children and adolescents: A meta-analysis. *Marriage and Family Review*, 53(7), 613–640. <https://doi.org/10.1080/01494929.2016.1247761>
- Plenty, S., & Mood, C. (2016). Money, peers and parents: Social and economic aspects of inequality in youth wellbeing. *Journal of Youth and Adolescence*, 45(7), 1294–1308. <https://doi.org/10.1007/s10964-016-0430-5>
- Pollard, E. L., & Lee, P. D. (2002). Child well-being: A systematic review of the literature. *Social Indicators Research*, 61(1), 59–78. <https://doi.org/10.1023/A:1021284215801>

- Ponnet, K. (2014). Financial stress, parent functioning and adolescent problem behavior: An actor–partner interdependence approach to family stress processes in low-, middle-, and high-income families. *Journal of Youth and Adolescence*, 43(10), 1752–1769. <https://doi.org/10.1007/s10964-014-0159-y>
- Poonawalla, I. B., Kendzor, D. E., Owen, M. T., & Caughy, M. O. (2014). Family income trajectory during childhood is associated with adolescent cigarette smoking and alcohol use. *Addictive Behaviors*, 39(10), 1383–1388. <https://doi.org/10.1016/j.addbeh.2014.05.005>
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24, 1–24. <https://doi.org/10.1146/annurev.soc.24.1.1>
- Posner, M. I., Rothbart, M. K., Sheese, B. E., & Tang, Y. (2007). The anterior cingulate gyrus and the mechanism of self-regulation. *Cognitive, Affective, & Behavioral Neuroscience*, 7(4), 391–395. <https://doi.org/10.3758/CABN.7.4.391>
- Poulton, R., Caspi, A., Milne, B. J., Thomson, W. M., Taylor, A., Sears, M. R., & Moffitt, T. E. (2002). Association between children’s experience of socioeconomic disadvantage and adult health: A life-course study. *Lancet*, 360(9346), 1640–1645. [https://doi.org/10.1016/S0140-6736\(02\)11602-3](https://doi.org/10.1016/S0140-6736(02)11602-3)
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, 42(1), 185–227. <https://doi.org/10.1080/00273170701341316>
- Putnam, R. D., Leonardi, R., & Nonetti, R. Y. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.
- Quoidbach, J., Mikolajczak, M., & Gross, J. J. (2015). Positive interventions: An emotion regulation perspective. *Psychological Bulletin*, 141(3), 655–693. <https://doi.org/10.1037/a0038648>
- Quon, E. C., & McGrath, J. J. (2014). Subjective socioeconomic status and adolescent health: A meta-analysis. *Health Psychology*, 33(5), 433–447. <https://doi.org/10.1037/a0033716>
- Ratcliffe, C. E., & McKernan, S. M. (2010). *Childhood poverty persistence: Facts and consequences*. Urban Institute. <https://www.urban.org/sites/default/files/publication/32926/412126-childhood-poverty-persistence-facts-and-consequences.pdf>
- Ratcliffe, C. E., & McKernan, S. M. (2012). *Child poverty and its lasting consequence: Low-Income Working Families* (Issue Paper 21) Urban Institute. <https://doi.org/10.2139/ssrn.2205388>
- Raver, C. C. (2012). Low-income children’s self-regulation in the classroom: Scientific inquiry for social change. *American Psychologist*, 67(8), 681–689. <https://doi.org/10.1037/a0030085>

- Raver, C. C., Blair, C., & Willoughby, M. (2013). Poverty as a predictor of 4-year-olds' executive function: New perspectives on models of differential susceptibility. *Developmental Psychology*, 49(2), 292–304. <https://doi.org/10.1037/a0028343>
- Raver, C. C., Gershoff, E. T., & Aber, J. L. (2007). Testing equivalence of mediating models of income, parenting, and school readiness for White, Black, and Hispanic children in a national sample. *Child Development*, 78(1), 96–115. <https://doi.org/10.1111/j.1467-8624.2007.00987.x>
- Raver, C. C., Roy, A. L., & Pressler, E. (2015). Struggling to stay afloat: Dynamic models of poverty-related adversity and child outcomes. In P. R. Amato, A. Booth, S. M. McHale, & J. Van Hook (Eds.), *Families in an era of increasing inequality: Diverging destinies* (Vol. 5, pp. 201–212). https://doi.org/10.1007/978-3-319-08308-7_14
- Raver, C. C., Roy, A. L., Pressler, E., Ursache, A. M., & McCoy, D. C. (2017). Poverty-related adversity and emotion regulation predict internalizing behavior problems among low-income children ages 8-11. *Behavioral Sciences*, 7(1), 2. <https://doi.org/10.3390/bs7010002>
- Raver, C. C., McCoy, D. C., Lowenstein, A. E., & Pess, R. (2013). Predicting individual differences in low-income children's executive control from early to middle childhood. *Developmental Science*, 16(3), 394–408. <https://doi.org/10.1111/desc.12027>
- Reichman, N. E., Teitler, J. O., Garfinkel, I., & McLanahan, S. S. (2001). Fragile Families: Sample and design. *Children and Youth Services Review*, 23(4–5), 303–326. [https://doi.org/10.1016/S0190-7409\(01\)00141-4](https://doi.org/10.1016/S0190-7409(01)00141-4)
- Reiss, F. (2013). Socioeconomic inequalities and mental health problems in children and adolescents: A systematic review. *Social Science and Medicine*, 90, 24–31. <https://doi.org/10.1016/j.socscimed.2013.04.026>
- Riina, E. M., Lippert, A., & Brooks-Gunn, J. (2016). Residential instability, family support, and parent–child relationships among ethnically diverse urban families. *Journal of Marriage and Family*, 78(4), 855–870. <https://doi.org/10.1111/jomf.12317>
- Ritterman, M. L., Fernald, L. C., Ozer, E. J., Adler, N. E., Gutierrez, J. P., & Syme, S. L. (2009). Objective and subjective social class gradients for substance use among Mexican adolescents. *Social Science & Medicine*, 68(10), 1843–1851. <https://doi.org/10.1016/j.socscimed.2009.02.048>
- Robson, D. A., Allen, M. S., & Howard, S. J. (2020). Self-regulation in childhood as a predictor of future outcomes: A meta-analytic review. *Psychological Bulletin*, 146(4), 324–354. <https://doi.org/10.1037/bul0000227>
- Rodems, R., & Shaefer, H. L. (2020). Many of the kids are not alright: Material hardship among children in the United States. *Children and Youth Services Review*, 112, 104767. <https://doi.org/10.1016/j.childyouth.2020.104767>

- Roosa, M. W., Morgan-Lopez, A. A., Cree, W. K., & Specter, M. M. (2002). Ethnic culture, poverty, and context: Sources of influence on Latino families and children. In J. M. Contreras, K. A. Kerns, & A. M. Neal-Barnett (Eds.), *Latino children and families in the United States: Current research and future directions* (pp. 27–44). Praeger Publishers/Greenwood Publishing Group.
- Rose, T., Joe, S., Williams, A., Harris, R., Betz, G., & Stewart-Brown, S. (2017). Measuring mental wellbeing among adolescents: A systematic review of instruments. *Journal of Child and Family Studies*, 26(9), 2349–2362. <https://doi.org/10.1007/s10826-017-0754-0>
- Roy, A. L., McCoy, D. C., & Raver, C. C. (2014). Instability versus quality: Residential mobility, neighborhood poverty, and children's self-regulation. *Developmental Psychology*, 50(7), 1891–1896. <https://doi.org/10.1037/a0036984>
- Roy, A. L., & Raver, C. (2014). Are all risks equal? Early experiences of poverty-related risk and children's functioning. *Journal of Family Psychology*, 28(3), 391–400. <https://doi.org/10.1037/a0036683>
- Russell, A. E., Ford, T., Williams, R., & Russell, G. (2016). The association between socioeconomic disadvantage and attention deficit/hyperactivity disorder (ADHD): A systematic review. *Child Psychiatry & Human Development*, 47(3), 440–458. <https://doi.org/10.1007/s10578-015-0578-3>
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069–1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Ryff, C. D. (2013). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics*, 83(1), 10–28. <https://doi.org/10.1159/000353263>
- Sariaslan, A., Larsson, H., D'Onofrio, B., Långström, N., & Lichtenstein, P. (2014). Childhood family income, adolescent violent criminality and substance misuse: Quasi-experimental total population study. *British Journal of Psychiatry*, 205(4), 286–290. <https://doi.org/10.1192/bjp.bp.113.136200>
- Sarsour, K., Sheridan, M., Jutte, D., Nuru-Jeter, A., Hinshaw, S., & Boyce, W. T. (2011). Family socioeconomic status and child executive functions: The roles of language, home environment, and single parenthood. *Journal of the International Neuropsychological Society*, 17(1), 120–132. <https://doi.org/10.1017/S1355617710001335>
- Schmid, K. L., Phelps, E., & Lerner, R. M. (2011). Constructing positive futures: Modeling the relationship between adolescents' hopeful future expectations and intentional self-regulation in predicting positive youth development. *Journal of Adolescence*, 34(6), 1127–1135. <https://doi.org/10.1016/j.adolescence.2011.07.009>
- Schmit, S., Matthews, H., & Golden, O. (2014). Thriving children, successful parents: A two-generation approach to policy. *Center for Law and Social Policy, Inc. (CLASP)*, 1–9.

- Schofield, T. J., Conger, R. D., Gonzales, J. A., & Merrick, M. T. (2016). Harsh parenting, physical health, and the protective role of positive parent-adolescent relationships. *Social Science and Medicine*, 157, 18–26. <https://doi.org/10.1016/j.socscimed.2016.03.027>
- Schröder, E., Schmitt-Rodermund, E., & Arnaud, N. (2011). Career choice intentions of adolescents with a family business background. *Family Business Review*, 24(4), 305–321. <https://doi.org/10.1177/0894486511416977>
- Schultz, J., O'Brien, A. M., & Tadesse, B. (2008). Social capital and self-rated health: Results from the US 2006 social capital survey of one community. *Social Science and Medicine*, 67(4), 606–617. <https://doi.org/10.1016/j.socscimed.2008.05.002>
- Schwartz, S. J., Unger, J. B., Zamboanga, B. L., & Szapocznik, J. (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist*, 65(4). <https://doi.org/10.1037/a0019330>
- Seligman, M. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. Simon and Schuster.
- Semega, J., Kollar, M., Creamer, J., & Mohanty, A. (2019). *Income and Poverty in the United States: 2018*. United States Census Bureau. <https://www.census.gov/library/publications/2019/demo/p60-266.html>
- Shaw, D. S., & Shelleby, E. C. (2014). Early-starting conduct problems: Intersection of conduct problems and poverty. *Annual Review of Clinical Psychology*, 10(1), 503–528. <https://doi.org/10.1146/annurev-clinpsy-032813-153650>
- Shelleby, E. C. (2018). Economic stress in fragile families: Pathways to parent and child maladjustment. *Journal of Child and Family Studies*, 27(12), 3877–3886. <https://doi.org/10.1007/s10826-018-1232-z>
- Shih, R. A., Miles, J. N. V., Tucker, J. S., Zhou, A. J., & D'Amico, E. J. (2010). Racial/ethnic differences in adolescent substance use: Mediation by individual, family, and school factors. *Journal of Studies on Alcohol and Drugs*, 71(5), 640–651. <https://doi.org/10.15288/jsad.2010.71.640>
- Shonkoff, J. P., & Fisher, P. A. (2013). Rethinking evidence-based practice and two-generation programs to create the future of early childhood policy. *Development and Psychopathology*, 25(4 pt 2), 1635–1653. <https://doi.org/10.1017/S0954579413000813>
- Shonkoff, J. P., Garner, A. S., Siegel, B. S., Dobbins, M. I., Earls, M. F., McGuinn, L., Pascoe, J., Wood, D. L., High, P. C., Donoghue, E., Fussell, J. J., Gleason, M. M., Jaudes, P. K., Jones, V. F., Rubin, D. M., Schulte, E. E., Macias, M. M., Bridgemohan, C., Fussell, J., ... Wegner, L. M. (2012). The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*, 129(1), e232–e246. <https://doi.org/10.1542/peds.2011-2663>

- Simons, L. G., & Steele, M. E. (2020). The negative impact of economic hardship on adolescent academic engagement: An examination parental investment and family stress processes. *Journal of Youth and Adolescence*, 49(5), 973–990. <https://doi.org/10.1007/s10964-020-01210-4>
- Simons, L. G., Wickrama, K. A. S., Lee, T. K., Landers-Potts, M., Cutrona, C., & Conger, R. D. (2016). Testing family stress and family investment explanations for conduct problems among African American adolescents. *Journal of Marriage and Family*, 78(2), 498–515. <https://doi.org/10.1111/jomf.12278>
- Simons, R. L., Beaman, J., Conger, R. D., & Chao, W. (1993). Stress, support, and antisocial behavior trait as determinants of emotional well-being and parenting practices among single mothers. *Journal of Marriage and the Family*, 55(2), 385–398. <https://doi.org/10.2307/352809>
- Slopen, N., Shonkoff, J. P., Albert, M. A., Yoshikawa, H., Jacobs, A., Stoltz, R., & Williams, D. R. (2016). Racial disparities in child adversity in the U.S.: Interactions with family immigration history and income. *American Journal of Preventive Medicine*, 50(1), 47–56. <https://doi.org/10.1016/j.amepre.2015.06.013>
- Snelgrove, J. W., Pikhart, H., & Stafford, M. (2009). A multilevel analysis of social capital and self-rated health: Evidence from the British Household Panel Survey. *Social Science and Medicine*, 68(11), 1993–2001. <https://doi.org/10.1016/j.socscimed.2009.03.011>
- Spessot, A. L., Plessen, K. J., & Peterson, B. S. (2004). Neuroimaging of developmental psychopathologies: The importance of self-regulatory and neuroplastic processes in adolescence. *Annals of the New York Academy of Sciences*, 1021(1), 86–104. <https://doi.org/10.1196/annals.1308.010>
- Stack, D. M., Serbin, L. A., Enns, L. N., Ruttle, P. L., & Barrieau, L. (2010). Parental effects on children's emotional development over time and across generations. *Infants & Young Children*, 23(1), 52–69. <https://doi.org/10.1097/IYC.0b013e3181c97606>
- StataCorp. (2019). *Stata statistical software: Release 16*. College Station, TX: StataCorp LLC.
- Statham, J., & Chase, D. E. (2010). *Childhood wellbeing: A brief overview*. London Childhood Wellbeing Research Centre. <https://www.gov.uk/government/publications/childhood-wellbeing-a-brief-overview>
- Steele, R. G., Nesbitt-Daly, J. S., Daniel, R. C., & Forehand, R. (2005). Factor structure of the parenting scale in a low-income African American sample. *Journal of Child and Family Studies*, 14(4), 535–549. <https://doi.org/10.1007/s10826-005-7187-x>
- Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. *Current Directions in Psychological Science*, 16(2), 55–59. <https://doi.org/10.1111/j.1467-8721.2007.00475.x>

- Sternthal, M. J., Slopen, N., & Williams, D. R. (2011). Racial disparities in health: How much does stress really matter? *Du Bois Review: Social Science Research on Race*, 8(1), 95–113. <https://doi.org/10.1017/S1742058X11000087>
- Sturge-Apple, M. L., Davies, P. T., Cicchetti, D., Hentges, R. F., & Coe, J. L. (2017). Family instability and children's effortful control in the context of poverty: Sometimes a bird in the hand is worth two in the bush. *Development and Psychopathology*, 29(3), 685–696. <https://doi.org/10.1017/S0954579416000407>
- Taylor, Z. E., & Conger, R. D. (2014). Risk and resilience processes in single-mother families: An interactionist perspective. In Z. Sloboda & H. Petras (Eds.), *Defining prevention science* (pp. 195–217). Springer US. https://doi.org/10.1007/978-1-4899-7424-2_9
- Taylor, Z. E., & Conger, R. D. (2017). Promoting strengths and resilience in single-mother families. *Child Development*, 88(2), 350–358. <https://doi.org/10.1111/cdev.12741>
- Taylor, Z. E., Conger, R. D., Robins, R. W., & Widaman, K. F. (2015). Parenting practices and perceived social support: Longitudinal relations with the social competence of Mexican-origin children. *Journal of Latina/o Psychology*, 3(4), 193–208. <https://doi.org/10.1037/lat0000038>
- Taylor, Z. E., Jochem, R., Early, D. R., Conger, R. D., Widaman, K. F., & Robins, R. W. (2012). Dispositional optimism: A psychological resource for Mexican-origin mothers experiencing economic stress. *Journal of Family Psychology*, 26(1), 133–139. <https://doi.org/10.1037/a0026755>
- Taylor, Z. E., Jones, B. L., Anaya, L. Y., & Evich, C. D. (2018). Effortful control as a mediator between contextual stressors and adjustment in midwestern Latino youth. *Journal of Latina/o Psychology*, 6(3), 248–257. <https://doi.org/10.1037/lat0000091>
- Taylor, Z. E., Larsen-Rife, D., Conger, R. D., & Widaman, K. F. (2012). Familism, interparental conflict, and parenting in Mexican-origin families: A cultural-contextual framework. *Journal of Marriage and Family*, 74(2), 312–327. <https://doi.org/10.1111/j.1741-3737.2012.00958.x>
- Taylor, Z. E., Larsen-Rife, D., Conger, R. D., Widaman, K. F., & Cutrona, C. E. (2010). Life stress, maternal optimism, and adolescent competence in single mother, African American families. *Journal of Family Psychology*, 24(4), 468–477. <https://doi.org/10.1037/a0019870>
- Taylor, Z. E., Widaman, K. F., & Robins, R. W. (2018). Longitudinal relations of economic hardship and effortful control to active coping in Latino youth. *Journal of Research on Adolescence*, 28(2), 396–411. <https://doi.org/10.1111/jora.12338>
- Taylor, Z. E., Widaman, K. F., Robins, R. W., Jochem, R., Early, D. R., & Conger, R. D. (2012). Dispositional optimism: A psychological resource for Mexican-origin mothers experiencing economic stress. *Journal of Family Psychology*, 26(1), 133–139. <https://doi.org/10.1037/a0026755>

- Teitler, J. O., Reichman, N. E., & Nepomnyaschy, L. (2004). Sources of support, child care, and hardship among unwed mothers, 1999-2001. *Social Service Review*, 78(1), 125–148. <https://doi.org/10.1086/380770>
- Teti, D. M., Cole, P. M., Cabrera, N., Goodman, S. H., & McLoyd, V. C. (2017). Supporting parents: How six decades of parenting research can inform policy and best practice. *SRCD Social Policy Report*, 30(5), 1–34. <https://doi.org/10.1002/j.2379-3988.2017.tb00090.x>
- Tomczyk, S., Isensee, B., & Hanewinkel, R. (2016). Latent classes of polysubstance use among adolescents-a systematic review. *Drug and Alcohol Dependence*, 160, 12–29. <https://doi.org/10.1016/j.drugalcdep.2015.11.035>
- Traub, F., & Boynton-Jarrett, R. (2017). Modifiable resilience factors to childhood adversity for clinical pediatric practice. *Pediatrics*, 139(5). <https://doi.org/10.1542/peds.2016-2569>
- Travis, R., & Leech, T. G. J. (2014). Empowerment-based positive youth development: A new understanding of healthy development for African American youth. *Journal of Research on Adolescence*, 24(1), 93–116. <https://doi.org/10.1111/jora.12062>
- Trentacosta, C. J., Hyde, L. W., Shaw, D. S., Dishion, T. J., Gardner, F., & Wilson, M. (2008). The relations among cumulative risk, parenting, and behavior problems during early childhood. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 49(11), 1211–1219. <https://doi.org/10.1111/j.1469-7610.2008.01941.x>
- Umberson, D., Crosnoe, R., & Reczek, C. (2010). Social relationships and health behavior across the life course. *Annual Review of Sociology*, 36, 139-157. <https://doi.org/10.1146/annurev-soc-070308-120011>.
- Ursache, A., & Noble, K. G. (2016). Neurocognitive development in socioeconomic context: Multiple mechanisms and implications for measuring socioeconomic status. *Psychophysiology*, 53(1), 71–82. <https://doi.org/10.1111/psyp.12547>
- Vacek, K. R., Coyle, L. D., & Vera, E. M. (2010). Stress, self-esteem, hope, optimism, and well-being in urban, ethnic minority adolescents. *Journal of Multicultural Counseling and Development*, 38(2), 99–111. <https://doi.org/10.1002/j.2161-1912.2010.tb00118.x>
- van Laar, C. (2000). The paradox of low academic achievement but high self-esteem in African American students: An attributional account. *Educational Psychology Review*, 12(1), 33–61. <https://doi.org/10.1023/A:1009032900261>
- Vennum, A., Lindstrom, R., Monk, J. K., & Adams, R. (2014). It's complicated: The continuity and correlates of cycling in cohabiting and marital relationships. *Journal of Social and Personal Relationships*, 31(3), 410–430. <https://doi.org/10.1177/0265407513501987>
- Vieno, A., Nation, M., Perkins, D. D., Pastore, M., & Santinello, M. (2010). Social capital, safety concerns, parenting, and early adolescents' antisocial behavior. *Journal of Community Psychology*, 38(3), 314–328. <https://doi.org/10.1002/jcop.20366>

- Wagmiller, R. L., Lennon, M. C., Kuang, L., Alberti, P. M., & Aber, J. L. (2006). The dynamics of economic disadvantage and children's life chances. *American Sociological Review*, 71(5), 847–866. <https://doi.org/10.1177/000312240607100507>
- Wallace, G. (2013). African-American mothers' community social capital and parenting quality: Does personal outlook make a difference? *Sociological Perspectives*, 56(2), 261–285. <https://doi.org/10.1525/sop.2013.56.2.261>
- Wallace, J. M. (1999). The social ecology of addiction: Race, risk, and resilience. *Pediatrics*, 103(5), 1122–1127.
- Wallace, J. M., Vaughn, M. G., Bachman, J. G., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. E. (2009). Race/ethnicity, socioeconomic factors, and smoking among early adolescent girls in the United States. *Drug and Alcohol Dependence*, 104(Suppl. 1), S42–S49. <https://doi.org/10.1016/j.drugalcdep.2009.06.007>
- Warheit, G. J., Vega, W. A., Khoury, E. L., Gil, A. A., & Elfenbein, P. H. (1996). A comparative analysis of cigarette, alcohol, and illicit drug use among an ethnically diverse sample of Hispanic, African American, and non-Hispanic White adolescents. *Journal of Drug Issues*, 26(4), 901–922. <https://doi.org/10.1177/002204269602600410>
- Watt, T. T. (2005). Race/ethnic differences in alcohol abuse among youth. *Journal of Ethnicity in Substance Abuse*, 3(3), 33–47. https://doi.org/10.1300/J233v03n03_03
- Webber, K. C., & Smokowski, P. R. (2018). Assessment of adolescent optimism: Measurement invariance across gender and race/ethnicity. *Journal of Adolescence*, 68, 78–86. <https://doi.org/10.1016/j.adolescence.2018.06.014>
- White, R. M. B., Liu, Y., Nair, R. L., & Tein, J.-Y. (2015). Longitudinal and integrative tests of family stress model effects on Mexican origin adolescents. *Developmental Psychology*, 51(5), 649–662. <https://doi.org/10.1037/a0038993>
- White, R. M. B., Zeiders, K. H., Gonzales, N. A., Tein, J.-Y., & Roosa, M. W. (2013). Cultural values, U.S. neighborhood danger, and Mexican American parents' parenting. *Journal of Family Psychology*, 27(3), 365–375. <https://doi.org/10.1037/a0032888>
- Wickrama, K. A. S., Lee, T. K., O'Neal, C. W., & Kwon, J. A. (2015). Stress and resource pathways connecting early socioeconomic adversity to young adults' physical health risk. *Journal of Youth and Adolescence*, 44(5), 1109–1124. <https://doi.org/10.1007/s10964-014-0207-7>
- Wickrama, K. A. S., O'Neal, C. W., & Holmes, C. (2017). Towards a heuristic research model linking early socioeconomic adversity and youth cumulative disease risk: An integrative review. *Adolescent Research Review*, 2(3), 161–179. <https://doi.org/10.1007/s40894-017-0054-3>

- Wilcox, C. E., Pommy, J. M., & Adinoff, B. (2016). Neural circuitry of impaired emotion regulation in substance use disorders. *American Journal of Psychiatry*, 173(4), 344–361. <https://doi.org/10.1176/appi.ajp.2015.15060710>
- Williams, D. R., Mohammed, S. A., Leavell, J., & Collins, C. (2010). Race, socioeconomic status, and health: Complexities, ongoing challenges, and research opportunities. *Annals of the New York Academy of Sciences*, 1186(1), 69–101. <https://doi.org/10.1111/j.1749-6632.2009.05339.x>
- Williams, D. R., Priest, N., & Anderson, N. (2016). Understanding associations between race, socioeconomic status and health: Patterns and prospects. *Health Psychology*, 35(4), 407–411. <https://doi.org/10.1037/hea0000242>.
- Wills, T. A., Simons, J. S., Sussman, S., & Knight, R. (2016). Emotional self-control and dysregulation: A dual-process analysis of pathways to externalizing/internalizing symptomatology and positive well-being in younger adolescents. *Drug and Alcohol Dependence*, 163(Suppl. 1), S37–S45. <https://doi.org/10.1016/j.drugalcdep.2015.08.039>
- Wright, M. O., Masten, A. S., & Narayan, A. J. (2013). Resilience processes in development: Four waves of research on positive adaptation in the context of adversity. In S. Goldstein & R. B. Brooks (Eds.), *Handbook of resilience in children* (2nd ed, pp. 15–37). Springer US. https://doi.org/10.1007/978-1-4614-3661-4_2
- Yamaoka, Y., & Bard, D. E. (2019). Positive parenting matters in the face of early adversity. *American Journal of Preventive Medicine*, 56(4), 530–539. <https://doi.org/10.1016/j.amepre.2018.11.018>
- Yin, X., Li, Z., Yuan, Y., & Wang, Z. (2019). Developmental trajectory of hope among late-adolescents: Population heterogeneity and the impact of gender and family socioeconomic status. *Journal of Adolescence*, 72, 124–131. <https://doi.org/10.1016/j.adolescence.2019.03.003>
- Yoshikawa, H., Aber, J. L., & Beardslee, W. R. (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth: Implications for prevention. *The American Psychologist*, 67(4), 272–284. <https://doi.org/10.1037/a0028015>
- Yu, D., Caughy, M. O. B., Smith, E. P., Oshri, A., & Owen, M. T. (2020). Severe poverty and growth in behavioral self-regulation: The mediating role of parenting. *Journal of Applied Developmental Psychology*, 68, 101135. <https://doi.org/10.1016/j.appdev.2020.101135>
- Zhang, S., Eamon, M. K., & Zhan, M. (2015). Neighborhood disorder, perceptions of neighborhood social capital, and maternal stress: Exploration of a mediating mechanism. *Journal of Community Psychology*, 43(3), 278–295. <https://doi.org/10.1002/jcop.21678>
- Zhang, X. (2014). Family income, parental education and internalizing and externalizing psychopathology among 2-3-year-old Chinese children: The mediator effect of parent-child conflict. *International Journal of Psychology*, 49(1), 30–37. <https://doi.org/10.1002/ijop.12013>

- Zilanawala, A., & Pilkauskas, N. V. (2012). Material hardship and child socioemotional behaviors: Differences by types of hardship, timing, and duration. *Children and Youth Services Review*, 34(4), 814–825. <https://doi.org/10.1016/j.chldyouth.2012.01.008>
- Zucker, R. A. (2008). Anticipating problem alcohol use developmentally from childhood into middle adulthood: What have we learned? *Addiction*, 103(s1), 100–108. <https://doi.org/10.1111/j.1360-0443.2008.02179.x>