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Sharon Borja

A Longitudinal Examination of Parental Adversity, Parenting Stress and Parenting Capacities of
African-American and Latina Mothers and their Children's Wellbeing

Sharon Borja

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Reading Committee:

Paula S. Nurius, Chair

Peter J. Pecora

Melissa Martinson

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University of Washington

Abstract

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Sharon Borja

Chair of the Supervisory Committee:
Professor Paula Nurius
School of Social Work

Adversities in childhood pose significant jeopardy of poor early life outcomes that can have lasting consequences, compromising future wellbeing of young children. Childhood exposures to extremely stressful experiences including multiple forms of adversities such as child maltreatment, poverty, family instability, violence at home and parent criminal and substance abuse histories become potential pathways to negative social and emotional outcomes. This dissertation uses a two-generation approach to build upon the mounting evidence on adverse childhood experiences and generate evidence regarding intergenerational adversity and its impact on parental capacities and early childhood socio-emotional health. This approach considers the nested nature of the parent-child relationship and focuses on further disentangling intergenerational processes of adversity accumulation and their impact on both generations.

Using the Fragile Families and Child Wellbeing data ($N=4,898$), a birth-cohort longitudinal study of mostly low-income children and their parents, the first paper examined parental adversity and its proximal consequences during critical periods of development in early childhood and tested variations between African-American, Latino, and white mothers. Findings showed intergenerational associations between parental adversity and childhood socio-emotional health at ages 1 and 5, underscoring the possibility of early detection of adversity's effects early

in the life course. The second paper used structural equation modeling to test the cumulative effects of adversity on parenting stress and parenting practices and whether they serve as mechanisms through which adversity impacts child socio-emotional outcomes. Results revealed early associations between parental adversity and parenting stress, parenting practices, and childhood socio-emotional health. Parenting stress and parenting practices as mechanisms of parental adversity were significant only for African-Americans. The third paper tested the protective role of informal supports in buffering adversity's negative impact on parental capacities and childhood socio-emotional wellbeing and compared the results across racial/ethnic groups. Findings supported the hypothesized links, including the attenuating effect of social support, but not for Latino mothers. This dissertation extends the robust evidence regarding the long-reaching effects of early exposures of children to the adversities of their parents as this study traces the empirically established life course associations back to early life, when the effects of adversity may just begin to manifest. It contributes new evidence regarding adversity's proximal effects and the intergenerational pathways that link it to early childhood socio-emotional health.

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DEDICATION

For my father, J.B., and my mother, L.B.

And to all the mothers and children I worked with as a child protective services social worker. Your resilience is my inspiration.

INTRODUCTION

The family, along with individuals and communities, has long been at the center of the social work profession. It is recognized as an important context of relationships, especially those that begin upon birth when a child is born into household. The family becomes pivotal in a child's healthy growth where cognitive stimulation and social development take place. It is here that children are safely nurtured and cared for, where parents are attuned to the needs of their children and provide a safe and nurturing environment. The experiences in the first years of life are extremely important for child's healthy development and early-life development has long reaching future effects on later health and success (Halfon, 2000). However, adversities such as child abuse, neglect, poverty, family instability, violence at home and parent criminal, substance abuse, and mental health histories pose significant threat to this foundation and could jeopardize early life outcomes that can have lasting consequences on the future wellbeing of young children (Anda, Butchart, Felitti & Brown, 2010). The well-documented relationship between socioeconomic status and health as the leading (although not the only predictor) of health disparities (Seith & Isakson, 2011) adds further insult to the vulnerability of young children from poor families, especially children of color who are often at the intersection of health, racial disparities and multi-form adversity putting them at a profound disadvantage.

In order to better understand the early context of development, my dissertation takes a two-generation approach to build upon the mounting evidence on childhood adversity and contribute a more nuanced understanding of early childhood socio-emotional wellbeing and parenting in the context of mounting adversity. A two-generation approach considers the nested nature of the parent-child relationship and focuses on further understanding intergenerational processes of adversity accumulation and their impact on the parent and the child, calling

attention towards their implications on further research and prevention/intervention development/adaptation that intentionally target both generations. The specific aims of this 3-paper dissertation projects are:

1. Investigate the accumulation of parental adversities and its proximal consequences during critical periods of development in early childhood (ages 1 and 5) and examine potential variations across racial/ethnic groups;
2. Examine the cumulative effects of parental adversities on parental stress and parenting capacities as intergenerational mechanisms through which parental adversities translate into child socio-emotional outcomes; and
3. Test the protective role of informal supports in buffering adversity's negative influence on parenting stress and parental capacities and compare across racial groups.

Symptoms of child psychopathology may often appear only after a child's critical years; by disentangling the association of adversities and socio-emotional health outcomes as they begin to accumulate early in life could potentially reveal associations and symptoms useful for very early assessment of psychopathology risk. The changing ethnic/racial demographics of the U.S. population also presents a heterogeneity within and between the racial/ethnic groups that needs further examination especially focusing on how cumulative adversity interacts with ethnicity/race. This is especially important since some ethnic groups are disproportionately exposed to more adversities than others, especially those living in poor, urban communities. Examining racial and ethnic disparities at an early juncture helps in identifying optimal times of interventions that are tailored to specific underserved population.

In addition to its long reaching negative influence, adversities are also known to intensify the negative effects of other difficulties and likely to give rise to additional stressors and their proliferation serving as mechanisms by which early stressors affect later health and well-being (Pearlin, Schieman, Fazio, & Meersman, 2005). Proliferation takes place beyond an individual's life span, cascading intergenerationally through the shared social and physical context of the child and parent. This common context lends to the direct exposure of the child to the stressors of her parents (e.g. poverty), or indirectly through the rippling effect of parent stress. Past studies have demonstrated the buffering role of a caring adult against the negative impact of stress. Testing parent stress and parenting capacity as pathways to socio-emotional health outcomes helps us understand how adversity depletes energies of otherwise caring adults and whether it also reduces their capacities to provide a safe and nurturing environment during developmentally sensitive life periods.

Contextualizing parenting stress and parenting capacities across different racial and ethnic groups also elucidates the cultural context of parent and child's stressful experiences. The growing cultural diversity of families in the United States prompts us to look beyond the concept of a nuclear family to a broader composition that includes an informal support system of other caring adults (e.g. extended family members, friends,). In order to better understand how to adapt culturally grounded parent/family interventions we first have to examine the constellation of protective factors that is inherent to their context. We begin by examining their informal support; how they buffer the impact of adversities on parenting stress and on the socio-emotional health of young children; and how they complement and strengthen capacities of highly stressed parents in providing a safe and nurturing environment for their children.

Utilizing a two-generation approach, this dissertation simultaneously focuses on parental factors and childhood outcomes. It recognizes that the socio-emotional wellbeing (and other outcomes) of children are nested within their families, where the family's informal social support system may also have an influence. The longitudinal, two-generation approach of this dissertation project in understanding the complex intergenerational processes of adversity accumulation and childhood socio-emotional outcomes is innovative as it will shed light to the factors that could vary over time (e.g. parental stress, social support, etc.) and whether these variations account for some of the outcomes in both generations, that of parents and their parental capacities and the socio-emotional health of their children.

This research project is part of a larger framework that informs my scholarship, where individual difficulties are given context, from the immediate family to the outer circles of social networks, communities, and socio-political structures. It encourages research and practice to rethink our approaches and shift focus from just the children or the parents as individuals towards a greater understanding of the broader context of their difficulties. Using cumulative inequality theory to scaffold this project's main research objectives, it further recognizes that life histories including intergenerational histories of disadvantage and adversities are important considerations in understanding parental resilience and capacities, especially within systems such as child welfare that tend to be punitive towards those that are disproportionately impacted by adversities. Results from this project have implications toward the prevention of child abuse and neglect as it takes a two-generation approach to better understand ways that parents thrive in adversity so they can create a nurturing context necessary for optimal development of the next generation.

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PAPER 1

EXAMINING RACIAL DISPARITIES IN THE ACCUMULATION OF PARENTAL ADVERSITY AND ITS PROXIMAL EFFECTS ON EARLY SOCIO-EMOTIONAL HEALTH

Introduction

Adversities in childhood, such as family instability, parental incarceration, parent mental health issues, and violence in the family, pose significant jeopardy of poor early life outcomes and could have lasting consequences that span a life course (Shonkoff et al., 2012). For many children, these adversities could seriously weaken the foundation within which their life trajectories are initially launched. This weakened base could undermine long term individual vitality and future productivity as adversities impose their enduring effects on various adult economic and physical and mental health outcomes (Anda et al., 2002, 1999; Dube et al., 2006; Shonkoff, 2010).

Advances in adverse childhood experiences (ACEs) research provide evidence of the enduring influence of adversity, where a step-dose response is established where greater adversity is linked with more negative adult outcomes (Dube et al., 2006). Even with the recent explosion of brain science regarding the effects of stressful experiences on childhood outcomes, we are now only beginning to understand the effects of adversity in early childhood. Less understood are the racial variations regarding early exposures to adversity and their associated early childhood outcomes (Ahern, Karasek, Luedtke, Bruckner, & van der Laan, 2016; Cronholm et al., 2015; Slopen et al., 2016; Wade, Shea, Rubin, & Wood, 2014). Moreover, the preponderance of evidence has largely focused on retrospective assessment of childhood exposures to adversity and has used single generation cross-sectional data. The current study

builds on this existing knowledge base by using longitudinal data to examine racial variations in adversity exposures and impacts. It uses a two-generation approach and conceptualizes parental adversities as childhood exposures to adversities, and simultaneously evaluates links to early socio-emotional health. Examining these early associations increases our understanding of the early impacts of adversity when biological systems are most malleable, presenting a great opportunity for decreasing vulnerabilities towards better social and health outcomes (Beauchaine, Neuhaus, Brenner, & Gatzke-Kopp, 2008).

Informed by cumulative inequality (CI) (Ferraro & Shippee, 2009) and life course frameworks of linked lives (Kuh, Ben-Shlomo, Lynch, Hallqvist, & Power, 2003), the current study attempts to provide an overview of racial variations in the maternal accumulation of parental adversity and early childhood socio-emotional health; and to assess variations in the effects of adversity on socio-emotional health. Both CI theory and life course framework emphasize the intergenerational accumulation of adversities and disadvantages (referred to hereafter only as adversities). Disadvantage refers to the experiences of individuals that are intertwined with socio-economic inequalities with resulting bifurcation of those negatively impacted by inequalities who experience greater socio-economic disadvantage from those who are socio-economically better-off. The life course notion of linked lives recognizes the shared environment at birth that becomes the context of children's exposure to adversity and underscores the potential explanatory role of early intergenerational exposures to adversity that could account for early life outcomes. Disadvantage.

Parental Adversity as Context of Early Socio-emotional Development

Parental adversity, or the exposures of parents to life course adversities such as partner incarceration, partner victimization, mental health challenges, family instability and socio-economic disadvantage, is essential to ACEs discourse. However, recent discourse has largely focused on childhood exposures to adversity and only lately have we begun a more intentional empirical focus to the central role of the parent in these exposures. The current study focuses on parental adult adversity to elucidate the intergenerational social context of early childhood exposures to these adversities within which parents play a vital role, as the exposures of parents to certain adversities by default become their children's exposures.

The environment, together with biological factors, direct developmental processes from the outset (Blair & Raver, 2012). For many children, multiple rather than single risk factor exposure related to poorer childhood socio-emotional outcomes characterize the early developmental environment. These risk factors could include experiences associated with poverty, having a parent with mental health difficulties, exposures to violence at home, and childhood victimization. There is ample evidence that link poverty to multiple developmental outcomes in early childhood (Noble, McCandliss, & Farah, 2007; Page, Wilhelm, Gamble, & Card, 2010). Children from impoverished households and low socio-economic status (SES) neighborhoods have a greater likelihood of experiencing less favorable cognitive and emotional and have higher propensity for developing problem behavior (Fauth, Leventhal, & Brooks-Gunn, 2007; Knapp, Ammen, Arstein-Kerslake, Poulsen, & Mastergeorge, 2007; Leventhal & Brooks-Gunn, 2000; Phillips, Shonkoff, & others, 2000; Korenman, Miller, & Sjaastad, 1995; Duncan, Brooks-Gunn, & Klebanov, 1994). Behavioral and educational outcomes are often compromised by poor housing conditions such as crowded housing and inadequate nutrition brought on by limited economic resources (Rollings, Wells, Evans, Bednarz, & Yang, 2017; Olson, 1999;

Brooks-Gunn & Duncan, 1997). Longitudinal studies have also shown the effects of lower household SES, transitions into poverty, and persistent low socio-economic status on externalizing and internalizing behavior including increased odds of developing early socio-emotional problems and higher rates of mental health problems over time (Reiss, 2013; Tearne et al., 2015; Wickham, Whitehead, Taylor-Robinson, & Barr, 2017).

In the context of economic disadvantage, many parents experience added tension brought on by the incarceration of a partner. Mothers left behind by an incarcerated partner often struggle with the stigma of incarceration, the resulting breakdown of family relationships, and the burden of becoming the sole caregiver and provider for the family (Sharp, Peck, & Hartsfield, 2012; Western & Wildeman, 2009). Children exposed to parental incarceration are often at higher risk for future antisocial behavior, juvenile justice involvement, mental health problems (Eddy, Cearley, Bergen, & Stern-Carusone, 2014; Turney, 2014; Lee, Fang, & Luo, 2013; Kjellstrand & Eddy, 2011; Western & Wildeman, 2009; Wilbur et al., 2007). Similar to their mothers, these children come face to face with spillover effects of traumatic separations, disrupted family relationships, reduced income, and the stigma of incarceration (Murray, Farrington, & Sekol, 2012). Incarceration in the United States is patterned by race (Pettit & Western, 2004). Consequently, families of color are disproportionately impacted by it and more children of color are likely to struggle with the collateral effects of their parents' incarceration than their white counterpart. The mass incarceration of African-American males in the United States underscores the disparate difficulties that African-American mothers and children may face as a result of their parental incarceration.

Parental adversity also includes experiences of intimate partner violence (IPV) or partner victimization (used interchangeably for the rest of the manuscript) known to have damaging

effects for mothers and children. The lifetime prevalence (24.3%) of physical IPV in the United States is higher for women than men, and for African-Americans (17.3%) compared to whites and Latinos women (15.2%) (Breiding, Chen, & Black, 2014; Cho, 2012). Mothers exposed to IPV are found to have greater risks for psychological distress, depression, and poor self-perceived health (Bonomi et al., 2006; Campbell, 2002; Golding, 1999; Vives-Cases, Ruiz-Cantero, Escribà-Agüir, & Miralles, 2011). Relatedly, children exposed to IPV have worse outcomes in multiple domains that span physical, behavioral, cognitive, and social outcomes (Howell, 2011; Kernic et al., 2003; Lieberman, Van Horn, & Ozer, 2005; Margolin & Gordis, 2000). Very young children are especially vulnerable to the devastating effects of IPV as they spend a significant amount at home and greatly rely on their parents for safety and protection (Margolin & Gordis, 2000). Ongoing partner victimization could exacerbate parenting stress as the trauma of violent victimization layers onto the daily pressures of fulfilling parenting roles and the challenges potentially brought on by socio-economic difficulties.

Maternal depression adds another layer of complexity to childhood exposures to their parents' adversity. More than 10% of mothers in the United States suffer depression, and although this evidence did not distinguish post-partum depression from ongoing maternal depression, this evidence still translates to the exposure of approximately 7.6 million children to maternal depression, with higher rates among white women, those who are economically disadvantaged, and among women who were born in the United States (Ertel, Rich-Edwards, & Koenen, 2011). The evidence is robust regarding the links between maternal depression and a range of childhood outcomes including adverse neurodevelopment, less favorable physical health, increased risk of behavioral, emotional, and cognitive problem, and attention disorders (Glover, 2014; Kleinhaus et al., 2013; Van den Bergh & Marcoen, 2004; O'Connor, Heron,

Golding, & Glover, 2003). Since depression often co-occurs with a range of life stressors, these effects could be confounded by other difficulties such as chronic economic deprivation or exposure to violence in the home.

Independently, each of the adversities discussed above could impose their strain on the parent and inflict harmful intergenerational effects on multiple childhood outcomes. More than a decade of adversity research reveals that stressors tend to function in a cumulative manner. When combined in a single index, these adversities link to worse outcomes in physical well-being, mental health, and social domains in adulthood (Larkin, Shields, & Anda, 2012; Nurius, Logan-Greene, & Green, 2012; Cuijpers et al., 2011; Dube, Felitti, Dong, Giles, & Anda, 2003; Anda et al., 2002; Felitti et al., 1998). Despite the steady increase of evidence regarding the many racial and ethnic disparities in the United States, racial and ethnic variations in adversity remains a relatively open field. The landmark ACE study involved mostly white participants (Felitti et al., 1998). Almost two decades later and this study has been replicated many times but only a limited number examined racial differences and mostly using cross-sectional data. Findings from these initial inquiries reveal racial differences where African-American and Hispanic children show higher prevalence of ACEs while children of immigrant parents had lower prevalence compared to those of U.S.-born parents (Slopen et al., 2016). Together, these studies reveal important evidence regarding the cumulative nature of adversities and the disproportionate accumulation of adversities by racial minority groups in the United States experience particularly when adversity measure was expanded to include exposures to community violence, experiences of discrimination, living in unsafe neighborhoods, and experiences of bullying (Cronholm et al., 2015; Wade et al., 2014), nuances that were relatively underexplored in early ACEs research. The considerable evidence regarding the disproportionate

impact of disparities on people of color begs for the expansion of adversity research to include diverse populations (Braveman & Barclay, 2009; Sternthal, Slopen, & Williams, 2011; Vega, Rodriguez, & Gruskin, 2009; Wakefield & Wildeman, 2011; Williams & Mohammed, 2009, 2013). This is particularly important because adults and children of color may be at a disproportionately greater risk of exposure to adversities.

Further, we are now only beginning to understand the effects of adversity earlier in the life course. A retrospective study conducted with pediatric population in San Francisco found that ACEs are associated with poorer health, learning difficulties, and behavior problems (Burke, Hellman, Scott, Weems, & Carrion, 2011). In an unrelated study, evidence supported the hypothesized link between increased adversity and poorer health and mental/behavioral health outcomes in early adulthood (Mersky, Topitzes, & Reynolds, 2013). Further, chronic ACEs in childhood have been shown to associate with physical health outcomes as children emerged into adulthood (Thompson et al., 2015). In addition, emerging evidence from adversity research in the past decade provide evidence regarding the unfavorable impacts of adverse exposures of children to childhood health outcomes, including maladaptive socio-emotional functioning in infancy, physical health in early childhood, earlier onset of substance use, externalizing and internalizing behaviors, and likelihood of ADHD diagnosis (Flaherty et al., 2006, 2009; Hunt, Slack, & Berger, 2016; Thompson et al., 2015). These recent developments further strengthen the need to examine adversity as early as possible in the life-course. Assessing the effects of adversity in early childhood has fundamental implications for primary prevention efforts that disrupt the long-reaching effects ACEs on mental health early on, particularly at a development stage when biological systems are malleable and the window of opportunity is wide open for decreasing vulnerabilities and preventing the emergence of poor health outcomes in adulthood

(Beauchaine et al., 2008). Just as the damaging effects of adversity could span a life-course, potentially so could the benefits that might stem from early childhood prevention efforts.

Theoretical Underpinnings

Cumulative inequality theory and the life course framework inform the hypothesized relationships proposed for this paper. Cumulative inequality theory overlaps with life course framework as it aims to explain processes and changes taking place over time, emphasizes life-course processes of adversity accumulation across developmental periods and recognizes the intergenerational nature of this accumulation (Ferraro et al., 2009). Life-course theory encourages the examination of these early-life experiences that can shape future outcomes and last a life time, possibly across generations (Braveman & Barclay, 2009). In particular, the life course concept of linked lives underpins the focus on both the parent and the child, recognizing that the shared environment at birth becomes the context of children's initial exposure to adversity. It further alludes to an intergenerational link, where some parental adversities could become their children's adverse childhood experiences and could partially define early experiences that become the foundation of development and future life trajectories.

The focus of the current study on early childhood is underpinned by the life course epidemiology concept of critical and sensitive periods of development. The critical period model hypothesizes that certain exposures in early years can leave biological and behavioral imprints that have lasting influence on social and emotional behavior (Knudsen, 2004; Kuh et al., 2003). While brain development continues past early childhood, the foundations are built during the early years through the dynamic interactions of genetic influences, environmental conditions and experiences (Fox, Levitt, & Nelson III, 2010; Grossman et al., 2003). Exposures to adversities during these time periods may increase levels of chronic and toxic that could negatively affect

early developmental processes (Evans, Gonnella, Marcynyszyn, Gentile, & Salpekar, 2005). Further, these exposures are intertwined with the physical and social environment, where children's early development may be impacted by the quality of home and neighborhood environment, particularly for those who live in resource-deprived families and communities (Evans, Brooks-Gunn, & Klebanov, 2011; Fauth et al., 2007).

The Present Study

This study recognizes that exposures to adversity take place within the context of the family where the biological and social interdependence of parents and children occur immediately upon birth. The current study builds on the existing knowledge regarding adversity and focuses on this early social context to examine the accumulation of parental adversities relative to proximal consequences on childhood socio-emotional well-being across two time periods, at the ages 1 (0-12 months) and 5 (60 months), across racial groups. Focusing on the early life-course is an attempt to better understand the presence of sensitive periods when accrued exposures may have a stronger effect versus other times and how these effects may vary across race. Toward examining the link between parental adversity and early socio-emotional health as they unfold over time, the following hypotheses are tested:

Hypothesis 1: Significant differences in the accumulation of parental adversity between racial groups is expected over time, where parents of color accumulate more adversities, consequently exposing their children to more adverse experiences during critical periods of development between the ages 1 and 5;

Hypothesis 2: Significant differences in levels of childhood socio-emotional wellbeing, where children of color are expected to have less favorable outcomes compared to their white peers at age 1 and over time;

Hypothesis 3: Parental adversity is expected to show a linear relation with child socio-emotional wellbeing, where greater parental adversity is positively linked to worse child socio-emotional health; and

Hypothesis 4: Given the robust evidence of racial disparities in the United States where people of color disproportionately experience poor health and economic outcomes, parental adversity is expected to have stronger effects on the socio-emotional wellbeing of children of color in this study.

Methods

Study Sample

In order to test the proposed hypotheses, the current study used data from the Fragile Families and Child Well-being Study (FFCW) ($N=4,898$). The FFCW study is a longitudinal cohort study of mostly low-income parents and their children born between 1998 and 2000 in U.S. urban cities. The study includes an oversample of children born to unmarried parents as well as an oversampling of African-American and Latino children. FFCW investigators collected data from birth and followed participating families for 15 years, with assessments when the children turned ages 1, 3, 5, 9, and 15. The current analysis used publicly available data from baseline at birth, and years 1, 3, and 5, downloaded from the Interuniversity Consortium for Political and Social Research website.

Participants in the FFCW study included 4,898 families (4,898 mothers and their children, and 3,830 fathers), of whom 47% identified as African-Americans, 27% as Latinos, 21% as whites, and 4% as others (McLanahan et al., 2003). This analysis uses individual unit of analysis utilizing data only from mothers and their children. Participants were asked about their past and current relationships, parenting-related experiences and perceptions, assessment of child

health, health, demographic characteristics, and their perceptions of their social network and communities (FFCW, n.d.). Since the focus of this analysis is on racial disparities, only African-American, Latino, and white participants were included because the number of American Indian and other racial/ethnic minorities was too small.

Key Measures

The main outcome measure for this paper is childhood socio-emotional health (SEH) measured at Years 1 and 5. Socio-emotional wellbeing at Year 1 was measured by the 12-item Emotionality and Shyness scale taken from the Emotionality and Shyness sections of the Emotionality, Activity, and Sociability (EAS) temperament survey for children (Mathiesen & Tambs, 1999). The emotionality section measures distress in very young children and the shyness scale measures inhibition and awkward behavior in new social situations (Fragile Families, n.d.). Emotionality and shyness are behavioral manifestations of responses to experiences, some potentially stressful, and may account for behavioral and mental health outcomes such as fear and anxiety disorders and the ability to regulate emotion in later stages (Calkins & Johnson, 1998; Compas, 1987; Stevenson-Hinde & Simpson, 1982). The 12 items were summed and divided by the total number of items to get a score (Fragile Families, n.d.), and then used the resulting measure as a continuous outcome variable in the analysis. Higher scores indicate worse SEH.

Socio-emotional health at year 5 was measured by a 19-item subset of items from the Child Behavior Checklist (CBCL) to assess hyperactivity, ability to concentrate or pay attention, clinginess, disobedience, nervousness, speech problem, mood changes, stubbornness, temperament, depression, attention-seeking, anxiousness, and age-appropriate actions/behavior. For example, the mother participant was asked to rate on a 3-point Likert scale (not true,

somewhat or sometimes true, very true or often true), for example, how true is it that the focal child “can’t concentrate, can’t pay attention for long”, “child clings to adults/is too dependent”, “child doesn’t get along with other children. The 19 items were summed to create a socio-emotional health score, with higher scores indicating worse SEH.

The parental adversity (PA) measure at Year 1 is a set of 8 items that measure of life course adversities and disadvantages experienced by the mother as reported at Baseline and Year 1. This measure is informed by the Center for Disease Control and Prevention’s (CDC) ACE index (see Table 1.1), combining adversities related to economic deprivation, social disadvantage, health challenges, unstable family circumstances, and experiences of partner violence. However, this set of items does not include all of the original ACEs items due to the limitation of using secondary data. The PA measure includes:

- Family instability in the participant’s family of origin as indicated by not having a father involved while growing up;
- Educational attainment of the participant;
- Thirteen-item material insecurity that includes three sub-measures that assessed whether the participant experienced food, housing, and/or financial insecurity;
- Partner incarceration;
- Seven-item intimate partner victimization that assessed physical, verbal, and emotional victimization in the month prior to the interview;
- Self-rated overall health status based on a Likert scale of mother’s assessment of their health from Excellent, Very Good, Fair to Poor;
- Maternal depression as measured by the Composite International Interview – Short Form (CIDI-SF), Section A (Kessler et al., 2010). The CIDI-SF measures whether mothers in

the study self-reported dysphoria or anhedonia for two weeks in the past year. These items were summed to create an index – an approach that is consistent with cumulative stress and cumulative disadvantage research approaches to measure aggregate load (Bauman, Silver, & Stein, 2006). The parental adversity measure at year 5 included all items from the original PA measure but re-assessed using information reported by the participants in year 5.

The PA measure also includes mother's report of social disadvantage in her childhood. Educational attainment of the mothers of the participant was used to measure disadvantage in the participant's family of origin. Other measures of adversity in families of origin of the participants were considered such as experiences of child maltreatment and neglect. However, these items were not available in the data at hand.

Demographic characteristics included race, based on the participants self-identifying as African-American, Latino, or white. Nativity of the parents was based on the self-report of mothers whether they were born in or outside of the United States.

Data Analysis

The present study is a secondary data analysis utilizing 3 waves of the FFCW data. The analysis included examining descriptive statistics of all individual variables that comprised the PA and the SEH measure and conducting t-tests for group comparisons. This basic statistical approach allowed for summarizing information that revealed meaningful data patterns and significant differences between racial groups. This approach was useful in identifying potential racial disparities in the accumulation of PA by the participants, the accumulation of their children's exposures to these adversities, and disparities in childhood SEH. One-way analysis of

variance (ANOVA) was used to compare means and to test whether differences across the three racial groups were statistically significant.

Ordinary least-squares (OLS) regression analysis was used to test the hypothesized sustained contribution of PA on early SEH at year 1 and year 5. Ordinary least-squares regression allowed for the evaluation of whether early SEH could be predicted based on the quantity of adversity accumulated by the mother. It also allowed for the assessment of the total variance explained by PA by examining the R-squared value. Nativity was included as a control variable in the model to account for some of the potential associations between particular items within PA (e.g., depression) with health outcomes based on findings from previous studies (Menselson, Rehkopf, & Kubzansky, 2008). Additionally, controlling for the effects of nativity was essential given the greater variance among the Latino subsample regarding nativity compared to the white and the African-American sub-samples.

Results

Descriptive statistics

Results showed the accumulation of adversities over time for all three racial groups, with African-Americans mothers accumulating more parental adversities followed by Latino mothers, at year 1 (see Figure 1.1). By year 5, the average adversity for African-American mothers was 13.67, which is an increase of 5.18 from year one. Latina mothers showed a smaller an increase at 4.97. White mothers had the lowest average in parental adversity at year 5, but showed the biggest increase at 5.2%.

Within PA measure, the difference in the proportion of African American mothers who reported experiences of having a partner that was ever incarcerated was 10 to 15% greater compared to Latinos and whites (Table 1.2). Reports of partner incarceration increased by year

5, with more than 12.1% increase for African-American mothers. This increasing trend was also observed among Latina and white mothers, although the increase is lower for these groups, at 9.9% and 7%, respectively. These differences are statistically significant at .05 alpha level.

More mothers reported material insecurity in year 5 than in year 1, and this trend is consistent across the three racial groups (Table 1.2). By year 5, the proportion of mothers reporting material insecurity almost doubled. Within material insecurity, the proportion of mothers who reported food insecurity swelled by year 5, with the greatest increase observed within the African-American sub-sample. In contrast, housing insecurity increased only for whites, and financial insecurity decreased for all groups by year 5.

Intimate partner violence was common among racial groups (Table 1.2). Of particular concern is the increasing prevalence for Latino and white mothers, where the proportion of reported victimization increased by 2.5 and 5.1 respectively. Interestingly, the proportion of African-American mothers who reported partner victimization decreased by 8.6% across the age points.

In a related vein, the prevalence for maternal depression decreased for African-Americans and Latinas (Table 1.2). By year 5, the proportion of African-American mothers who met the conservative criteria for depression decreased by one% while Latina mothers showed a 1.2% decrease. In contrast, the prevalence of depression increased for white mothers from 11.5 in year 1 to 14.3% in year 5.

Results partially supported hypothesized racial differences in socio-emotional health where children of color were expected to have worse socio-emotional than their white counterpart (Figure 1.2). These results were comparable across groups in year 1, where African-

American children exhibited worse health than their Latino and white counterparts. The same pattern was observed in year 5. However, the differences were no longer statistically significant.

OLS Regression

The regression model achieved significance and results revealed that greater parental adversity is associated with worse childhood socio-emotional health across racial groups (Table 1.3). The relation of PA to childhood socio-emotional health at year 1 is strongest for whites, followed by African-Americans. The same pattern was observed at year 5, where PA was linked to childhood socio-emotional health, with strongest coefficients observed among whites, followed by African-Americans. Increase in PA's effects was lowest among African-Americans, while effects for both Latino and white mothers increased by 12 between years 1 and 5, holding nativity constant. Additionally, results indicate that U.S. born Latinos reported better socio-emotional health of their children on average compared to their non-U.S.-born counterpart.

Discussion

This study contributes to the expanding knowledge of early childhood adversity by using longitudinal cohort data to examine the accumulation of parental adversities and its contribution to early childhood socio-emotional health. It expands our understanding of the context within which children grow and develop, and the central role of the parent in their children's accumulation of childhood adversities. These findings also underscore important racial variations in this context between families of color and their white counterparts. Findings suggest continued accumulation of parental adversities by mothers from the birth of their child to age 5, with similar patterns across racial groups, which points to the cumulative exposure of their children to adversities in early childhood. Racial differences are also observed in each of the individual adversities, where the prevalence was higher for mothers of color in some areas like partner

incarceration but decreasing in other areas like maternal depression and partner victimization. Results provide evidence for the early detection of the effects of these exposures on socio-emotional health outcomes as early as age one. These effects are patterned by race. But contrary to the hypothesis of the present study, effects of parental adversity were strongest among white families. These findings have implication for preventive interventions towards the reduction of childhood exposures to ACEs, which by default should target the reduction of parents' adverse experiences.

Cumulative Nature of Parental Adversity

Central to this paper is the notion that adversity is cumulative with lasting effects. Current Findings support this assumption, revealing an upward trend in maternal exposures to adversity. Exposures to material insecurity is of particular concern. More than a quarter of mothers in the sample struggled with a lack of economic resources at the beginning of the study and almost twice as many by year 5. For some families, material insecurity means having limited options for adequate housing. For others, it could mean not having enough food to nourish their children or the inability to maintain basic utilities like water or electric. Consistent with the present study hypothesis, more mothers of color contend with material hardship and possibly with related stress caused by the uncertainty of having their basic needs met. More than fifty% of African-American mothers find themselves wedged in multi-year situation of economic deprivation and insecurity and may have limited options to escape the situation as evidenced by the increased prevalence in material economic insecurity over time. This is consistent with the well-established evidence regarding economic disparities where African-Americans are disproportionately earning less and have lesser wealth and lower probability of economic mobility than their white counterparts (Patten, 2016; Urahn et al., 2012).

However,, white children are not exempt from economic hardship and uncertainties. More than 42% of white mothers reported material insecurity, indicating economic disadvantage for their children similar to the African-American sub-samples. Latino families fared only a bit better compared to their peers. Still, over 40% reported material insecurity and showed the same increasing trend, accumulating more economic-related difficulties over time. The evidence presented here suggests an early developmental context of many children characterized by lasting economic hardships where children of color are disproportionately impacted. Some of these children grow up within poor housing conditions and experience inadequate nutrition, making them vulnerable to various unfavorable behavioral and education outcomes in childhood (Rollings et al., 2017). Children who grew up in impoverished conditions are more likely exposed to various poverty-related stressors such as having psychologically distressed parents who may exhibit less parental warmth and harsher parenting, and to the chaos and substandard conditions of resource-deprived schools and communities, compared to those who grew up in higher income households (Crnic, Low, & Bornstein, 2002; Evans, 2004; Evans et al., 2011; Grant et al., 2003; Kim, Capistrano, & Congleton, 2016). Cumulatively, these factors are known to cause elevated levels of chronic stress that could impact brain development and compromise early cognitive and socio-emotional development (Evans et al., 2005; Evans & Kim, 2013). Life course epidemiology concept of critical and sensitive periods of development underscore the role of these adversities in leaving biological and behavioral imprints early in the life course when foundations to healthy social, emotional, and cognitive development are laid (Fox et al., 2010; Knudsen, 2004; Kuh et al., 2003)

Layering onto material hardship for many families is their exposure to emotional pain and other negative impacts of incarceration of a partner or a parent. Evidence from the current

study reveals disparities in exposures to partner incarceration where more African-Americans and Latinos are exposed over time. This is consistent with existing evidence of disproportionality within the criminal justice system where African-Americans are overrepresented (Pettit & Western, 2004). Latino males are also experiencing higher rates of incarceration than white males (Mauer, 2011; Western & Pettit, 2010). For partnered males, their incarceration speaks of the unstable family circumstances they left behind (Sharp et al., 2012). Of particular concern are the intergenerational impacts of parental criminal justice involvement. Children within these families are exposed to conditions often associated with parental incarceration such as poverty, mental health and substance abuse problems, and intergenerational incarceration (Western & Wildeman, 2009; Geller, Garfinkel, Cooper, & Mincy, 2009; Bouchet, 2008; Travis & Waul, 2003). Sources for prosocial modeling and emotional support may be compromised and lacking (Borja, Nurius, & Eddy, 2016). African-American and Latino children are at a disadvantage as they are disproportionately exposed to parental incarceration and have greater probability of incarceration compared to their white peers (Clear, 2007; Roettger & Swisher, 2011). In addition to its intergenerational impacts, one might be concerned about the impacts on the partner left behind during incarceration. For example, in the case of father's incarceration, the mothers' support is compromised as they become sole providers and may not have anyone to share the burden of caring for their children. The lack of support could impose strain on the mother and trigger greater parental stress as she contends with the stress brought on by unstable and disrupted relationships. Past studies have also shown that families impacted by incarceration often have extended family members who are also experiencing similar circumstance alluding to a potentially compromised support system for these families.

The higher prevalence of partner victimization among mothers of color in this sample further supports the hypothesized racial disparities. While the proportion of African-American mothers who reported partner victimization decreased from year 1 to year 5, they still have the highest percentage of mothers reporting victimization at almost 47% in year 1 and 38% in year 5. This is consistent with recent estimates of lifetime prevalence of IPV being highest for African-Americans (Breiding, Chen, & Black, 2014). This is a major public health crisis that should be more broadly recognized and addressed more effectively. Partner victimization is associated with many unfavorable outcomes both for the mother and the children. The current study provides supporting evidence regarding the increased vulnerability of mothers of color to psychological distress, trauma, and poor mental health when exposed to partner victimization. Children of color are also disproportionately at greater risk for the devastating effects of IPV manifesting early in the life course as poor behavioral and cognitive outcomes. Moreover, their sense of safety may be shaken when mothers' capacity to assure safety and protection is compromised by their own traumatic experiences (Margolin & Gordis, 2000).

Findings regarding the higher prevalence of depression for white mothers in this sample is consistent with evidence regarding higher rates of depression among women in the United States (Ertel et al., 2011; Williams et al., 2007). The decreasing trend for depression among African-American and Latina mothers, however, merit further attention. In fact, Latina mothers had the lowest prevalence of depression at both time points. These findings spur further questions. What are some of the factors that contribute to the higher prevalence of depression among white mothers? What accounts for lower prevalence among mothers of color? One would expect that higher prevalence in maternal hardship, partner incarceration, and partner victimization, would also indicate greater maternal depression. However, there was no evidence

to support this assumption. Does this finding suggest the presence of unassessed protective factors against the damaging effects of adversity on maternal mental health? Do these protective factors foster hardiness in the context of persistent adversities? These questions are spurred by the buffering hypothesis model where social resources such as supportive relationships are hypothesized to have some protective effect against the detrimental effects of stress caused by adversities (Cohen & McKay, 1984). Moreover, findings from previous studies suggest potential buffering factors such as family networks and spirituality that could be targets for interventions, particularly for Latinos (Menselson et al., 2008; Plant & Sachs-Ericsson, 2004). An alternative explanation of these trends could be the willingness of participants to report symptoms and cultural factors unaccounted for in the model of the present study. Future research should consider assessing culturally relevant factors around depression reporting and symptomatology, and the testing of protective factors as potential targets for future interventions.

Early Life Associations

Findings support the hypothesized association between parental adversity and early socio-emotional health. These findings provide evidence regarding the early detection of the effects of adversity early in the life course. The preponderance of evidence in ACEs research points to the long-reach of adverse childhood experiences towards various adult outcomes. This finding expands ACEs knowledge by demonstrating that parental adversity is significantly associated to worse socio-emotional health as early as age one. Contrary to the hypothesis of the current study, the effects of parental adversity were strongest for white families. This finding was unexpected and begs further consideration. The mothers of color in this study accumulated significantly more adversities than their white counterpart. Yet the effects of these adversities are attenuated compared to their white counterpart. What factors are responsible for these attenuated

associations? Similar to the questions raised in the preceding section, are there protective factors that may account for some of the intergenerational effects of parental adversity on child socio-emotional health? These group differences particularly underscore the importance of testing protective factors that pertain to culture. This is especially salient for Latinos who may have cultural values and traditions that are distinct from their non-Latino white counterparts. For example, previous studies have shown strong family ties as a strong cultural value and many view their families as sources of support (Holleran & Waller, 2003). Future studies should consider further testing of these and other potential protective factors in relation to cumulative parental adversity.

Implications

The above discussion shows an uneven playing field where children of color begin their lives in the context of greater adversity. Parents are implicated in the process as their adverse experiences define the context within which their children grow and develop. As adversities accumulate over time, the exposures of their children also increase and the foundation of their socio-emotional development gets compromised early on. Nevertheless, findings in this study also provide a ray of hope. The early detection of the effects of adversity points to a potential window of opportunity for primary interventions to make the most impact early in the life course when biological systems are most malleable (Beauchaine et al., 2008). Testing which protective factors are most amenable targets for early childhood interventions is the next task at hand.

Particularly exciting at this juncture is the growing recognition of parents as key players, not only in the exposure of their children to adversity, but also in fostering their resilience. Decades of intervention research provide evidence to the effectiveness of various empirically validated parenting programs such as The Incredible Years Program, the Triple-P-Positive

Parenting Program, and Parenting Inside Out for incarcerated parents, to name a few (Borden, Schultz, Herman, & Brooks, 2010; Sanders, 1999; Schiffmann, Eddy, Martinez, Leve, & Newton, 2008). Many families have benefitted from such programs that foster resilience and promote positive early childhood outcomes. These positive program outcomes spur further question regarding what parallel interventions may enhance short- and long-term outcomes, particularly for families who are disproportionately impacted by adversities. Future research should consider the effectiveness of these programs vis-à-vis cumulative parental adversity. Many parents struggle with chronic food and housing insecurity, mental health problems, incarceration and violence and the provision of information could fall short in addressing some of the broader problems related to these adversities. Parents at elevated risk for these adversities could potentially benefit from policies that increase access to economic resources which may have implications towards decreased parenting stress. This is particularly important for families who are at-risk or who are already involved in the child welfare system as the chronic lack of economic resources is commonplace among them. Many of the factors that contribute to parental adversity are patterned by race. Therefore, future policies should target the many disparities in the United States, especially the disproportionate criminalization and incarceration of particular racial groups that often cascade into unstable family relationships and greater parenting burden for the partner left behind.

Within social work practice settings, greater attention to the assessment of parental adversity could be useful in helping social workers and other professionals get a broader picture of the lives of their clients. This is especially important in the child protective services where parents are often misunderstood as unwilling and uncooperative in their case plan, when their capacity to engage could be influenced by the cumulative burden of their adverse experiences. A

formal assessment of the cumulative adversity of parents, and integrating these in social work reports to the court systems could help other professionals, including presiding judges, understand the multi-faceted needs of a parent and create case plans that better respond to those burdens. Services that are responsive to parental adversities could potentially improve outcomes for parents at risk for greater adversities as they engage in parent education programs, especially for parents in the child welfare system who are court-ordered to participate.

Finally, future research should consider protective factors that promote parent resilience and child socio-emotional health in the face of adversity. One such protective factor are social resources in the form of social supports which have been shown to have some mitigating effect against some form of adversities. Additionally, as science moves forward with further discovery to inform early childhood policies and practices, it can be more responsive to the cultural context of these families and their adverse experiences related to racism and discrimination (Knudsen, 2004). A greater understanding of culturally relevant factors is needed, especially for Latinos and African-Americans in the United States whose cultural values and traditions are distinct from the majority non-Latino white population, and whose lifetime of experiences may include experiences of discrimination and racism.

Limitations

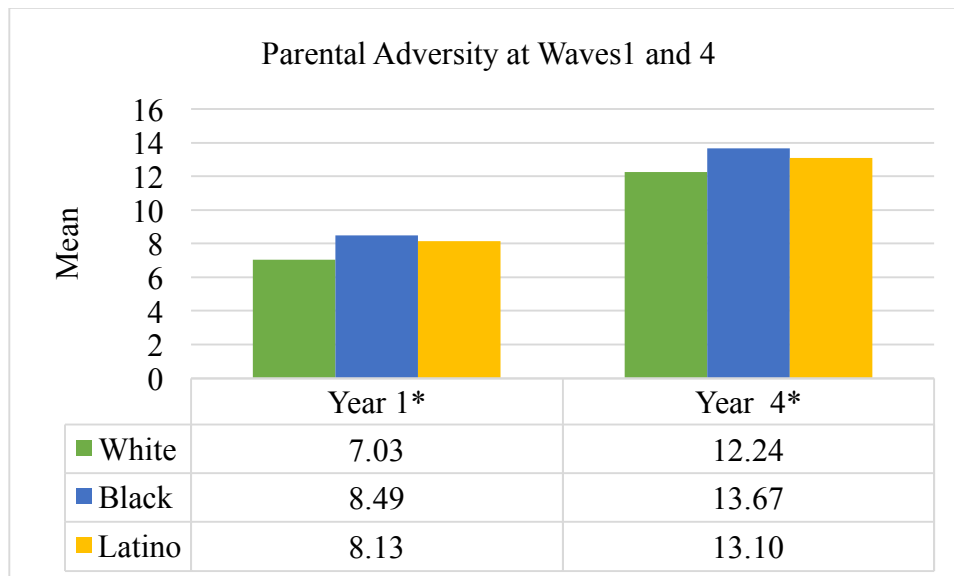
As with most studies, this study has its own limitations. First, this study used secondary data which limited the construction of the measurements used for the analysis. For example, the PA measure only included variables available from the data at hand. Thus, it is somewhat a restricted measure of parental adversity and does not include a wider array of adversities that could impact early socio-emotional health. Some of the factors that were not assessed are exposures to childhood victimization, community violence and experiences related to

immigration and discrimination. Thus, it is not known how childhood victimization may have influenced the hypothesized associations. The FFCW study also used different measurements to assess socio-emotional health at various time points, rendering it impossible to use more sophisticated techniques such as latent growth curve modelling to estimate changes over time. Nevertheless, the current study was able to generate relatively new evidence regarding adversity's effects early in the life course even with a more parsimonious approach to data analysis.

Conclusion

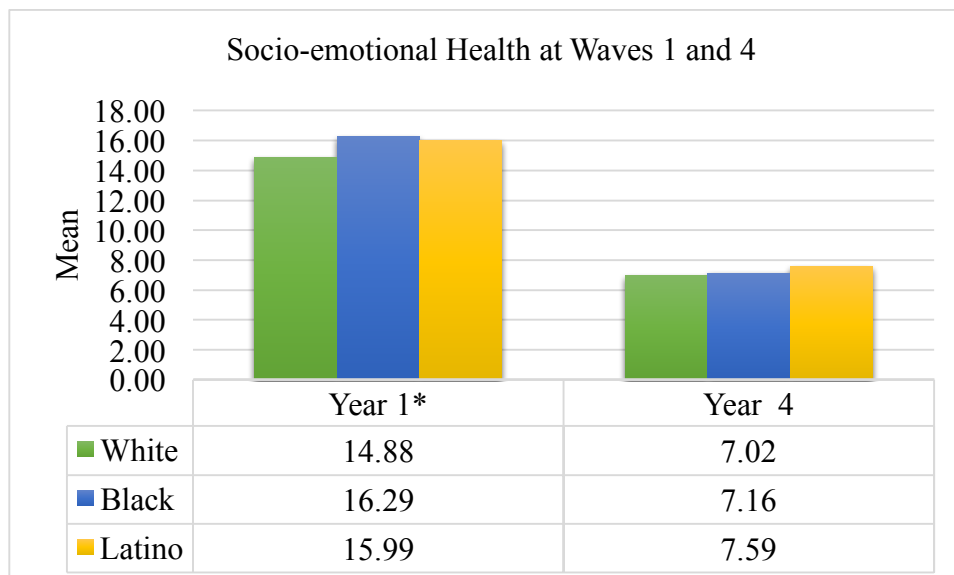
For many families in the U.S. urban cities, adversities characterize the context of parenting and child development. Many families struggle with material hardship, victimization, mental health problems, and family instability due to incarceration. The findings from the current suggest the chronicity of some of these adversities compromising the developmental foundation from where developmental trajectories are initially launched. Findings support the hypothesized disproportionate accumulation of more adversities by mothers of color compared to their white counterpart. While the hypothesized intergenerational association between parental adversity and childhood socio-emotional health was supported, there was little evidence to support the notion that these effects are stronger for families of color. Future research should consider protective and resilience-fostering factors as targets of upstream approaches towards the promotion of parent capacities and child well-being, and keeping in mind that some of these factors could also be patterned by race.

Figure 1.1
ANOVA results comparing means of accumulated parental adversity by racial groups from Time 1 to Time 4.



* indicates p values less than .05.

Figure 1.2
ANOVA results comparing means of childhood socio-emotional wellbeing by racial groups from Time 1 to Time 4.



* indicates p values less than .05.

Table 1.1
Comparison between CDC ACE Index and the parental adversity measure in the present study.

CDC ACE Index*	Parental Adversity Measure
Abuse	
Emotional abuse	Not assessed
Physical abuse	Not assessed
Sexual abuse	Not assessed
Household challenges	
Mother treated violently	Intimate partner victimization
Household substance abuse	Not assessed
Mental illness in household	Maternal depression
Parental separation or divorce	Not having a father involved while growing up
Criminal household member	Partner incarceration
Neglect	
Emotional neglect	Not assessed
Physical neglect	Not assessed
	Educational attainment
Material insecurity	
	Food insecurity
	Financial insecurity
	Housing insecurity

*All ACE questions were assessed during first 18 years of life. **Parental adversity measure was assessed throughout the life course of the mother, including socio-economic disadvantage from her family of origin.

Table 1.2
Proportion of participants who reported material insecurity, partner incarceration, intimate partner violence, and maternal depression at Age 1 and Age 5 by race.

	African-Americans		Latinos		Whites	
	Year 1	Year 5	Year 1	Year 5	Year 1	Year 5
	%		%		%	
Material insecurity**	31.2	53.5	26.7	40.1	25.9	42.7
<i>Food insecurity</i>	11.3	15.2	12.3	13.3	10.1	11.9
<i>Housing insecurity</i>	22.5	20.3	18.3	17.7	18.0	18.4
<i>Financial insecurity</i>	70.5	65.1	58.2	54.0	60.0	56.4
Partner incarceration*	41.1	53.4	29.1	39.0	24.7	31.7
Intimate partner victimization*	46.9	38.3	27.8	30.3	21.3	26.4
Maternal depression ^a *	13.5	12.5	10.6	9.4	11.5	13.3

Note: * = $X^2 < .05$; ** $X^2 < .01$; ^a = $X^2 < .08$ at Age 1.

Table 1.3

OLS regression results showing the relations between parental adversity (PA) and nativity at Age 1 with socio-emotional health at Age 1 and Age 5 by race.

	Socio-emotional Health					
	African-Americans		Latinos		Whites	
	Year 1	Year 5	Year 1	Year 5	Year 1	Year 5
	β (Adjusted R ²)		β (Adjusted R ²)		β (Adjusted R ²)	
PA Year 1	.16**		.09**		.19**	
PA Year 5		.24**		.21**		.31**
US Born	-.02	-.03	-.12**	-.13**	.03	.02
R ²	(.02)	(.06)	(.02)	(.05)	(.04)	(.10)

*Note: a = $p < .08$; * = $p < .05$; ** = $p < .01$.*

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PAPER 2

A LONGITUDINAL STUDY OF INTERGENERATIONAL MECHANISMS OF ADVERSITY TOWARDS THE SOCIO-EMOTIONAL HEALTH OF AFRICAN-AMERICAN AND LATINO MOTHERS IN THE UNITED STATES

Introduction

Early life experiences establish the foundation for a lifetime of physical and mental vitality (Shonkoff, 2012). Adversities in childhood pose significant threats to this foundation and increase the vulnerability of young children to poor early life outcomes such as physical and health problems. The influence of these outcomes could span a life course and can have lasting consequences, compromising future wellbeing of young children. Childhood exposures to adversities often take place within the social context of the family where biological and social interdependence of parents and their children occur immediately upon birth (Bronfenbrenner & Morris, 2006). The nested nature of parent-child relationships points to intergenerational processes embedded within this shared ecology as it becomes the developmental context from which life trajectories initially take direction. In this paper, I examine the intergenerational processes by examining how adversities of parents could be linked to their early socio-emotional health of their children, and how parenting-related factors could become pathways through which adversity imposes its influence. I apply a two-generation analytical approach to test a model theorizing parental stress and parenting practices as pathways of adversity's influence on early socio-emotional health and to help advance our understanding regarding intergenerational factors that link adversity to early life outcomes.

Parental adversity and childhood socioemotional health

More than a decade of research focusing on adverse childhood experiences (ACEs) has generated a vast amount of evidence that implicate early social conditions in undermining infant, child and youth development and contributing to poor adult outcomes. ACEs, defined by ten categories of abuse, neglect, and maladaptive family functioning in the initial study, increase the risk for poor health outcomes, including cardiovascular, pulmonary diseases, and mental health disorders among many others (Anda et al., 1999, 2006; Chapman et al., 2004; Dong et al., 2004; Dube, Felitti, Dong, Giles, & Anda, 2003; Green et al., 2010; Kessler et al., 2010). Collectively, these studies, though cross-sectional in design, offer compelling evidence of the corrosive legacy of childhood adversity that could be traced back to the development of neurobiological systems that are compromised by stressful and sometimes traumatic experiences early in life (Dube et al., 2003). For example, experiencing child maltreatment can have profound impact on a developing brain and could impair early socioemotional and cognitive functioning (Anda et al., 2006; McLaughlin, Sheridan, & Lambert, 2014; Teicher & Samson, 2016) and elevate risks for future mental disorders (Cohen, Brown, & Smaile, 2001)

Exposures to childhood adversity are inherently intergenerational, where adverse experiences of younger generation of children become inextricably linked to the experiences of their parents and to the family context shared between them. The operational definition of ACEs highlights the intergenerational nature of these exposures to distressing or harmful childhood experiences in a family or social environment with varying severity and chronicity (Kalmakis & Chandler, 2014). The landmark ACEs study assessed self-reported exposures of adult participants to adversities that pertained to their home and family environment (Felitti et al., 1998). Since then, numerous studies have replicated the aforementioned study using comparable approaches to assess exposures to childhood adversity. The World Health Organization

conducted a similar survey with more than 51,000 participants in 21 countries of various income classification (Kessler et al., 2010). This survey assessed childhood events related to parental maladjustment, parental criminality, economic difficulties, and maltreatment. Results from these and other similar studies emphasize long term associations between childhood adversities and adult outcomes, and suggest the presence of pathways that we are now only beginning to understand. Within these significant associations is the impression that parents and the shared household context are implicated in the process, but that community and larger societal factors may be at work as well (Marmot, 2005). The exposures considered in these studies point to the fundamental role of parents as they, on one hand, set the context of their children's early accumulation of stressful and sometimes traumatic experiences. On the other hand, parents and other caregivers also can be sources of nurturing that support healthy development of brain and neuroendocrine systems that serve as foundations of early socioemotional and cognitive development, as well as good health (Nelson, Kendall, & Shields, 2014).

Even with robust and mounting evidence regarding the long reach of childhood adversities on various adult outcomes, pathways are yet to be determined (Green et al., 2010), particularly the early intergenerational social pathways linking parental adversities to early childhood socioemotional health. In order to better understand the intergenerational context of childhood adversities, we must build a greater understanding of the experiences of parents involved in the process. Some of the questions that are largely unexplored pertain to the relation between adversity and parenting practices and whether parenting-related factors such as parental stress play a mediating role. The preponderance of childhood adversity data is cross-sectional and retrospective (Kalmakis & Chandler, 2015) making it difficult to create sound statistical models to test intergenerational pathways such as parental stress and parenting practices.

Childhood adversity scholars are cognizant of this, noting the limitation of retrospective data collection potentially influenced by recall bias (Green et al., 2010), and the challenge of establishing temporality with cross-sectional data (Dube et al., 2003).

Testing parent stress and parenting practices as mechanisms through which known early life adversities translate into child socio-emotional outcomes helps us understand the contribution of cumulative adversity towards the depletion of capacities of otherwise caring adults. It will also increase our understanding of the potential influence of adversity on parent capacities to provide a nurturing environment particularly during developmentally sensitive life periods. Evidence shows that experiences in the first years of life are extremely important for a child's healthy development (Halfon, Larson, & Russ, 2009). Early childhood presents a sensitive period where neurobiology is most malleable and the insults of early negative experiences are most reversible (Weiss & Wagner, 1998). The central nervous system requires experiences to develop properly during these sensitive periods and these experiences play a critical role in brain architecture and plasticity (Knudsen, 2004). The presence of sensitive periods in the life course underscores the significant role of parents as nurturing caregivers to their children as the home and family environments they create become powerful determinants of emotional, behavioral, cognitive, social, and physiologic functioning of their children later in life.

Parenting stress and positive parenting practices

Parenting stress, or the experience of distress in response to the demands of parenting (Deater-Deckard, 1998), has long been considered as a predictor of child development. There is ample evidence that support this relation. Parenting stress was also found to predict negative parent behavior (Anthony et al., 2005; Mackler et al., 2015). However, there is little evidence to

support parenting behavior or practices as mediators of parenting stress and early socio-emotional and behavioral health. In this case mediator functions as a pathway of some of the effects of parenting behavior or practices. In a study of pre-school behavior, parenting stress was associated with children's internalizing and externalizing behavior but this relation was not mediated by specific parenting behaviors (Anthony et al., 2005). In similar studies, parenting stress was found to be predictive of parent and child behavior but there was no evidence to support the mediating role of parenting behavior on early behavior problems (Barnett, Shanahan, Deng, Haskett, & Cox, 2010; Crnic, Gaze, & Hoffman, 2005). These studies confirm other findings regarding the links between high levels of parenting stress to negative parenting (Deater-Deckard, 2005).

Positive parenting practices (as a measure of parenting capacity) have also been found to have a negative association with early childhood risk for social and behavioral development (Cprek, Williams, Asaolu, Alexander, & Vanderpool, 2015). Children's stress response as indicated by disrupted cortisol patterns is also associated with non-supportive parenting behavior, especially for those living in poverty (Lengua, Bush, Long, Kovacs, & Trancik, 2008). Surprisingly, to date, only one study provided evidence in support of a mediation model of parenting behavior hypothesizing the role of parenting behavior as a pathway towards child behavior (Deater-Deckard & Scarr, 1996). Despite the growing interest regarding the key role of parenting in child development, convincing evidence regarding the mediating role of parenting practices in the context of parenting stress is lacking. Hence, examining the mediating roles of parenting stress and practices becomes more salient as we consider relatively recent development of our understanding of child development. Recent research studies underscore the importance of early experiences through the biological embedding hypothesis, where experiences are known to

influence biological development (Hertzman, 2012). Biological embedding evidence further underscores the importance of considering the role of parents, as they are the immediate social context of their children's experiences. The quality of these experiences is influenced by parenting practices, whether positive or negative, where positive parenting practices may prevent or lessen negative biological embedding.

Finally, relatively missing from parenting stress and parenting behavior literature is the broader contextualization of parenting stress and parenting behavior within cumulative experiences of adversity. Many parenting stress studies focused largely on poverty and maternal psychopathology as predictors of parenting stress (Kotchick, Dorsey, & Heller, 2005; Pinderhughes, Nix, Foster, & Jones, 2001; Russell, Harris, & Gockel, 2008; Wilson, 1991). For example, poverty has been shown to be predictive of parental stress among mothers. Another study shows that maternal depression influences the stress experiences by the mother. These studies expanded our understanding of the larger context of parenting stress. However, an intergenerational cumulative framework would further enrich our insight of that context. With increasing knowledge regarding the embodiment of the effects of adversity early in the life course, it is imperative to investigate whether intergenerational processes are implicated.

Examining the intergenerational impacts of adversity and their pathways is advanced by longitudinal cohort data that includes two generations of parents and their children. This enables the establishing of temporality by identifying variables of interest at various time points. Utilizing longitudinal data could address the existing challenges of cross-sectional data, fill empirical gaps, and help advance our understanding of intergenerational pathways of parental adversity towards early socio-emotional health. In consideration of existing empirical gaps, this study examined the proximal effects of parental adversity on early childhood socio-emotional

health and tested the mediating role of parenting stress and practices. The analysis utilized 4 waves of a longitudinal cohort data to test a path model with variables taken from different time points to establish temporality.

Theoretical Underpinnings

The conceptual model of this study includes parental adversity as a predictor of early socio-emotional health, and hypothesizes that some its effects could be observed through parenting stress and practices. These relations are informed by cumulative inequality (CI) theory, life course frameworks of stress proliferation and linked lives.

CI theory developed from cumulative advantage/disadvantage theory (O’Rand, 1996; Dannefer, 1987) that theorized processes of accumulation of benefits when experiencing early advantage and the piling up of adverse consequences for those who experience early disadvantage. It aims to explain processes and changes taking place over time, life-course processes of adversity accumulation across developmental periods, and the intergenerational nature of this accumulation (Ferraro et al., 2009). CI theory builds upon the above notions and emphasizes differential exposures to risks and opportunities that could define life trajectories (Ferraro & Shippee, 2009). Cumulative inequality theory proposes that “social systems generate inequality, which is manifested over the life course through demographic and developmental processes” (Ferraro & Shippee, 2009). Within this axiom, CI theory recognizes that important role of family lineage and context in the differential exposures to risks and opportunities early in the life course. It further underscores the importance of both childhood conditions and the intergenerational nature of adversity accumulation, positing the role of disadvantages in increasing exposures to risks, and the role of advantages in generating more opportunities for positive experiences.

The life course notion of linked lives (Elder Jr, Johnson, & Crosnoe, 2003) underpins the simultaneous consideration of parent and child in the present study, and recognizes that the shared environment at birth becomes the early context of children's exposure to adversity. Intergenerational exposures to adversities happen within this shared context and could account for later life outcomes. Epigenetic studies further reinforce these assumptions and support the notion that the family environment is a critical context for stress regulation (Johnson, Riley, Granger, & Riis, 2013). An individual's capacity to regulate stress early in the life course could influence the foundation of their early childhood social-emotional health.

Similarly, the stress proliferation framework posits accumulation but emphasizes the role of secondary stressors (e.g., demands of parenting, social services systems-involvement) that emerge over the life course in the form of further adversities that could undermine resilience (Pearlin & Bierman, 2013; Pearlin, Schieman, Fazio, & Meersman, 2005). The stress proliferation framework further asserts that chronic stress can emerge within the shared environment of the family as a result of constant exposure to adversities, and it suggests potential processes where future outcomes are anchored and from which trajectories may take shape (Turner & Schieman, 2008). This "domino effect" distinguishes stress proliferation framework from CI theory as the former implicates secondary stressors generated by prior adversities as potential pathways towards unfavorable life outcomes. Stress proliferation informs the current hypothesis that parental adversity could influence levels of parenting stress and strain the capacity of parents to engage in positive parenting practices. These domino effects could, in turn, compromise early socio-emotional health.

Study goals

Together, the aforementioned theory and frameworks provide the scaffolding to an *a priori* model that illustrates intergenerational causal relations. The goal of this study is to test the fit of the study model (Figure 2.1) hypothesizing the proximal association between parental adversity and childhood socio-emotional health, and parenting-related mechanisms that could account for some of these associations. In this model, (Hypothesis 1) greater parental adversity in the form of social disadvantage, physical and mental health problems, material insecurity, and exposures to partner violence and incarceration is hypothesized to predict worse childhood socio-emotional health; (Hypothesis 2) parental stress is hypothesized to mediate some of the effects of parental adversity towards childhood socio-emotional health outcomes; and (Hypothesis 3) parenting practices are hypothesized to mediate the effects of parental adversity and parental stress on childhood socio-emotional health.

In addition, the focus of this study includes special attention to the three major racial groups in the United States, namely African-American, Latino, and white. And this aspect of the study is informed by epidemiological evidence regarding various racial disparities in health and their varying histories (Lu & Halfon, 2003; Sternthal, Slopen, & Williams, 2011). This paper tested the extent of variability across racial groups in all variables, hypothesizing families of color would report greater levels of adversity, parental stress, and lesser engagement in positive parenting practices, and their children exhibiting less optimal socio-emotional health compared to their white counterparts.

Methods

Data

The Fragile Family Child Wellbeing (FFCW) study is a birth-cohort longitudinal study of mostly low-income children and their parents. The FFCW is based on a stratified, multistage, probability sample of children born in large U.S. cities from 1998 to 2000, with an oversample of children born to unmarried parents (Reichman, Teitler, Garfinkel, & McLanahan, 2001). This paper used data from the baseline survey and from subsequent waves of data collected when the children in the study turned one, three, and five. Only publicly available portions of the FFCW data set were utilized for this analysis.

Participants

Participants in the FFCW study include both fathers and mothers at birth. Of the 4,869 participants, 57% were African-Americans, 27% are Latinos, and 37% are whites. They were interviewed at birth and at age one, three and five. This study included data only from mothers because of their sustained participation in the study across waves. Data collected in these interviews include information on relationships, parenting behavior, demographic characteristics, health, socio-economic status and services received from government systems (FFCW, n.d.). This study focused on group comparisons between the three major racial/ethnic groups in the United States. Thus, only participants who identified as African-American, Latino, and white were included.

Key Measures

Demographic variables

Race/ethnic background was based on the self-report of participants regarding which race category described them best. A Latino subsample was created based on participant report of

Latino or Hispanic origin or descent. There were 2,326 African-American mothers, 1,336 Latino mothers, and 1,030 white mothers included in the analysis.

Endogenous variable

Child socio-emotional health outcome was assessed at age five (wave 5) with a 19-item subscale of the Child Behavior Checklist reported by the mother. These items include behaviors related to hyperactivity, inability to concentrate or pay attention, clinging to adults, excessive crying, disobedience, nervousness, speech problem, sudden changes in mood, being stubborn, temper tantrums, depression, being withdrawn, attention-seeking, feeling worthless, fear or anxiety, trouble sleeping, lack of remorse, and acting young for her age. The individual items were later used as indicators of socio-emotional health within a latent variable framework. The internal consistency of this measure was evaluated using Cronbach's alpha where the alpha coefficient was .836 indicating that reliability of the measure.

Exogenous variable

Parental adversity was measured as the sum of self-reported adversities by the mother. This measure is informed by the maternal distress model (Arditti, et al., 2010) and combines adversities related to social disadvantage and family instability in childhood, health status, experiences of partner violence, food insecurity, housing insecurity, financial insecurity, partner incarceration, and depression. Childhood social disadvantage was measured by the educational attainment of the mother and the father of the participant while family instability was measured by self-report of the mother whether father was involved in her life during childhood. Health status was based on self-rated health of the mother. Partner violence was assessed by self-report of the mother whether she was subjected to any form of verbal, emotional, or physical abuse by her partner. Food insecurity was measured by the self-report of participant mothers or their

children going hungry or receiving free food or meals. Housing insecurity included experiences of eviction, inability to pay rent, staying in a place not meant for regular housing, or moving in with others due to financial problems. Financial insecurity comprised mother's report of not having enough money to pay for utilities, getting utilities disconnected or shut off for non-payment, or having to borrow money from friends or family to pay bills. Depression was measured by the Composite International Diagnostic Interview - Short Form (CIDI-SF), Section A. The CIDI is a standardized instrument for epidemiological and cross-cultural assessment of mental disorders and in this study it was used to assess whether study participants experienced dysphoria or anhedonia for two weeks or more in the past year (Kessler et al., 1998).

The above items were later summed in this study to create an index of parental adversity that comprise an array of risk factors. The use of a cumulative index instead of a latent measure of parental adversity is consistent with cumulative stress and cumulative disadvantage research approaches to assess aggregate loads (Bauman, Silver, & Stein, 2006). This approach is consistent with the use of a cumulative measure of ecological risks in Mackenzie, Kotch, and Lee (2011) where they used FFCW data and demonstrated that cumulative measures is a powerful tool to assess overall burden of risk within a family.

Mediator Variables

The ***parental stress*** measure from wave 3 was based on a four-item Likert-scale adapted from the Job Opportunities and Basic Skills Training Program (JOBS) Child Outcomes Study (FFCW, n.d.). The Child Development Supplement of the Panel Study of Income Dynamics was used to validate this construct and evaluate how well it parenting stress brought on by changes in employment, income and other factors in the parent's life (Fragile Families and Child Wellbeing Study, n.d.). The participants answered the following questions regarding their perceptions of

their parenting role: (a) Being a parent is harder than I thought it would be; (b) I feel trapped by my responsibilities as a parent; (c) I find that taking care of my child(ren) is much more work than pleasure; and, (d) I often feel tired, worn out, or exhausted from raising a family. Together, these four items have an alpha of .636.

Parenting practices was measured in wave 3 by self-reported frequency of the mother engaging the child in developmentally appropriate activities. The participants were asked how often per week she engages in certain activities. These included the following 13 developmentally appropriate activities initiated by the mother: (a) sing songs or nursery rhymes to child; (b) hug or show physical affection to child; (c) tell child she loves him; (d) let child help her with household chores; (e) play imaginary games with child; (f) read stories to child; (g) play inside with toys with child; (h) tell child you appreciated what they did; (i) take child to visit relatives; (j) go to restaurant or out to eat with child; (k) assist child with eating; and, (l) put child to bed. This measure has an alpha of .714.

Data Analysis

This paper used a secondary data analysis approach to analyze baseline, waves 1, 3, and five of the FFCW data. The waves correspond with the age of the target child, where waves 1, 3, and 5 refer to ages 1, 3, and 5, respectively. First, descriptive analysis and ANOVA were conducted to examine levels of parental adversity, parenting stress and practices, and childhood socio-emotional health. Whether levels of the same composite variables varied between African-Americans, Latinos, and whites was also examined. These variables are from the baseline and wave one survey data. Subsequently, in order to test the hypothesized intergenerational mediated relations between parental adversity and early socio-emotional health, structural equation modeling (SEM) was used to analyze multi-wave raw data from the FFCW using Mplus. Mplus

is a flexible statistical tool that allows for complex models that include observed and latent constructs, and it offers estimations for categorical data (Muthen & Muthén, 2010).

SEM is a two-stage process that involves testing the fit of the measurement model first, particularly when the structural model includes latent variables. In this study, childhood socio-emotional health is considered a latent variable. Confirmatory factor analysis (CFA) was used to test the fit of the latent constructs. After the measurement model shows good fit to the data, then the fit of the structural model to the data can be tested using SEM. The SEM approach allowed for simultaneous testing (Kline, 2011) of the direct association of parental adversity to socio-emotional health at age 5, and the pathways of parental stress and parenting practices through which we observed some these effects. Finally, multiple group testing was conducted to compare differences in pathways between African-American, Latinos, and whites.

This study used weighted least squares with mean and variance adjustment (WLSMV) to estimate both the measurement model and the structural model. WLSMV is a robust estimator suitable for estimating models with dichotomous or ordinal variables, and it has performed well with sample size that are greater than 200 (Muthen & Muthen, 1998). This approach also allows the model to maximize all information from the data using pairwise deletion -- which is recommended if the number/% of missing observations is small (Kline, 2011). In confirmatory factor analysis, WLSMV is less biased and more accurate than other robust estimators in estimating factor loadings (Li, 2016).

This estimation technique provides fit statistics used in assessing model fit including Root Mean Square of Error of Approximation (RMSEA), Comparative Fit Index (CFI), and the

Tucker Lewis Index (TLI)¹. An RMSEA lower than .06 and CFI and TLI values higher than .95 are considered good fit (Hu & Bentler, 1999), whereas, RMSEA values that are lower than .10 and CFI above .90 indicate acceptable fit (Brown & Cudeck, 1993).

¹ RMSEA coefficient is used to evaluate approximate model fit; CFI and TLI are both incremental fit indices and they are used to evaluate model fit in comparison to a more parsimonious model that assumes variables are independent of each other (Geiser, 2012).

Results

Descriptive statistics and bivariate correlations

Tables 2.1 shows descriptive statistics for each of the predictor, mediator, and outcome variables. In general, African-American mothers fared worse, scoring higher in the parental adversity index, followed by Latinos. Both racial minority groups fared worse compared to white mothers in almost all of the individual indicators of adversity, except for partner victimization. Latino mothers fared the worst in education, where a greater majority reported that their mothers only had high school education or below. They also reported worse health. A larger proportion of African-Americans, on the other hand, reported economic disadvantage particularly observed in their experiences of food insecurity, housing insecurity, and financial insecurity. Furthermore, more African-American mothers reported maternal depression and partner incarceration. African-Americans also reported greater levels of parenting stress than Latino and white mothers. The frequency in which mothers engage in positive parenting practices with their children is lowest for Latino mothers, followed by African-American mothers. There are no significant racial/ethnic group differences in the socioemotional health of children at age five.

Correlation statistics for the full sample are shown on Table 3. All variables of interest showed significant correlation in the expected direction, and the pattern is similar to the results of correlation analysis by race. Parental adversity and parenting stress were positively correlated such that more experiences of parental adversity were linked to greater levels of parenting stress. Higher levels of parental adversity were also associated with less frequent engagement in positive parenting practices and worse socioemotional health of young children.

Measurement model

The one factor parenting stress construct showed satisfactory fit to the data (RMSEA = .04; CFI = .96; TLI = .878). The TLI value is below the suggested threshold. However, the rest of the fit statistics indicate good fit. Additionally, there is sufficient degrees of freedom to allow for parameter estimation. Goodness-of-fit statistics for the socio-emotional health latent construct showed good fit to the data (RMSEA = .053; CFI = .927; TLI = .917).

Structural model

The *a priori* model in this study depicts hypothesized relations between parental adversity and socio-emotional health, as mediated by parental stress and parenting practices. Goodness-of-fit statistics suggest satisfactory fit of the model to the data (RMSEA = .031; CFI = .942; TLI = .943) partially supporting the hypothesized model. Overall, results provide evidence to support the assumption that parental adversity could exert its influence on the socioemotional health of young children and that intergenerational processes, particularly through factors related to parenting, are implicated in the process.

Table 2.3 show coefficients for all hypothesized relationships for each of the racial subgroups. Results from multiple group analysis partially supported the hypothesized relationships as depicted in Figure 2.1. Parental adversity was predictive of socio-emotional health at age five and this association was significant for all sub-groups

Results supported the first hypothesis where parental adversity was theorized to have a direct contribution to socio-emotional health, such that greater levels of parental adversity is predictive of less optimal socio-emotional health at age 5. This link is significant in all subgroups, and the magnitude of the associations were stronger for white participants. Results also suggest that parental adversity has a direct contribution to parenting stress and parenting

practices but these associations are observed only for African-Americans. Parental adversity did not have significant direct association on both mediating variables for Latino and White mothers.

The indirect effect of parental adversity on socio-emotional health at age 5 through parenting stress was only significant for African-American mothers in this sample. Results on Table 4 indicate that the hypothesized mediating role of parenting practices was also not supported for any of the sub-groups.

Discussion

This study examined the proximal association between parental adversity and early socio-emotional health of young children and the role of parenting stress and parenting practices as pathways of this link within a national sample of the three largest racial groups in the United States. The results of this study confirm the assumptions of cumulative inequality theory and life course frameworks particularly for African-American families, revealed in the intergenerational association between parental adversities on the socio-emotional health of their children. This study extends the robust evidence regarding the long-reaching effects of early exposures of children to the adversities of their parents as this study traces the empirically established life course associations back to early life, when the effects of adversity may just begin to manifest. More importantly, this study's use of two-generation longitudinal data contributes new evidence regarding adversity's proximal effects and the intergenerational pathways that link it to early childhood socio-emotional health. This study demonstrates these pathways by linking data from mothers collected during baseline and during the first three years of their children to the socio-emotional health outcomes of their children at age 5.

Disparities in parental adversity

Results reveal racial disparities in the accumulation of parental adversity. The individual indicators of parental adversity are patterned by race, with mothers of color in this sample disproportionately experiencing more adversity. This is particularly more pronounced for African-American mothers who reported greater uncertainty in meeting everyday basic needs of food, housing, and finances which is consistent with racial disparities in socio-economic status in the United States. African-American mothers fared worst in their health. Given that a greater proportion of African-American reported material insecurity, this finding was not unexpected based on established evidence regarding socio-economic status as a predictor of health (Marmot, 2002; Williams & Jackson, 2005). The experiences of African-American mothers also extend to their exposure to unstable family circumstances. The incarceration of their partners impact the stability of the home where mothers and their children could experience repeated and abrupt disruptions (Arditti, 2012). Stress proliferation theory would suggest that these unstable circumstances could set in motion other adversities and stressful circumstances, including greater socio-economic disadvantage and parental stress of the single-earning parent left behind by partner incarceration, and placement of children in foster care.

It is important to note that white mothers reported greater experiences of partner victimization. This is not consistent with results from prior studies where no racial differences in IPV prevalence were found (Catalano, Smith, Snyder, & Rand, 2009; Ingram, 2007). One possible explanation could be the reluctance to report victimization. This reluctance could be particularly relevant for Latino mothers who hold religious and cultural tradition that does not encourage disclosure of family problems. More studies are needed to confirm this unexpected disparity.

Parental adversity and socio-emotional health

The larger ACES evidence base is clear regarding the persistent association of early adversity with many adult outcomes, including worse cardiovascular and pulmonary health, mental health and even a shorter lifespan. This study attempted to trace this relation to early life well-being of respondents' young children and found that some of the impacts of parental adversity on socio-emotional health, can already be detected as early as pre-school years. This finding speaks to CI theory's notion that differential exposures to risks early in the life course could define differences in individual trajectories, by helping shape this early foundation that could pave a path towards good health or the lack thereof. The cumulative approach to understanding differential exposures emphasizes less on single risk factors and puts greater emphasis on the aggregate load of adverse exposures to multiple risk factors within the household and family context (MacKenzie et al., 2011). Further, the contribution of parental adversity to early socio-emotional health supports the assumption that the accumulation of adversities is inherently intergenerational, where the adversities accumulated in the life course of a parent in a way characterize the family environment within which parenting takes place. Consequently, this early environment defines some of the experiences of their children where they could begin a life of early disadvantage upon birth and where these disadvantage may significantly relate to decrements in early life socio-emotional health. This is consistent with the assumption of a *linked lives* framework that emphasizes the interdependent relationship between the parent and the child as their shared environment become the context of the intergenerational process of adversity accumulation (Elder Jr et al., 2003).

This context could be characterized by a lack of basic needs, and the presence of family instability, and violence. These are some of the factors that characterize the early environment of children, especially children of color in this sample whose parents have already

disproportionately accumulated more adversities than their white counterpart. It is interesting to note, however, that the effects of parental adversity on early socio-emotional health is stronger for white families. Given that the African-American and Latino mothers in this sample reported greater experiences of adversity, a stronger impact for those parenting groups was anticipated. However, findings point to the contrary and prompt further questions. Protective factors are known to temper some of adversity's effects (Benzies & Mychasiuk, 2009; Masten, Best, & Garmezy, 1990; Rutter, 1987; Vanderbilt-Adriance & Shaw, 2008). Could protective factors that are unaccounted for and unmeasured in this study's model explain the difference? Are there disparities in protective factors, wherein families of color may have more of the factors that are consequential in diminishing the unfavorable effects of adversity? This finding underscores the need to develop conceptual models that include fuller testing of protective factors and how they may differ across racial/ethnic groups.

Pathways of adversity

Contrary to the expectations of this study, results regarding parental stress as a pathway of parental adversity towards childhood socio-emotional health is inconsistent across racial/ethnic groups. The pathway model for parental stress is only significant for African-American participants. The non-significant finding for the Latino and white subgroups is similar to the conclusions of various studies that parental stress may be directly linked to parenting behavior and child health, but not having a mediating role. This study is one of the few studies that tested the mediating role of parental stress and found support to this hypothesis, albeit only for African-American families.

Consistent with stress proliferation framework, parental experiences of adversity such as the lack of basic of needs, unstable family circumstance, and victimization could further trigger

stressful events. The chronicity of some of these adversities could impose further strain on the household and intensify levels of parenting stress. This highly stressed environment could then serve as the early developmental context of their children. When exposures to a stressful environment happen during sensitive periods when neurobiology is most plastic, they could leave a lasting imprint and impact regulatory systems that are central to socio-emotional development (Weiss & Wagner, 1998). In a parallel vein, the plasticity of these systems underscores the importance of interventions that address parental stress, especially for parents of color who are exposed to greater adversities –that despite the adversities that accumulated in their life course, they can continue to become capable of fostering a nurturing context for their children.

This is not to say that parenting stress or parenting practices does not matter for the rest of the sample. Consistent with past findings, parenting stress and practices for Latino and white mothers are still predictive of their children’s socio-emotional health. This merits continued empirical attention, particularly in finding ways to better support parents early in the life course. Additionally, these findings highlight the need for more empirical pathway models of adversity to identify mediating factors unaccounted for in present models.

Limitations

One of the most important challenge in testing mediational models is establishing temporality. Many studies largely used cross-sectional data that limits the ability to determine causality. This study is an attempt to address this issue by using multiple waves of a longitudinal cohort data. This allowed the researcher to establish temporality. Nevertheless, one must still exercise caution in concluding causality from these results.

The constrained measurement of parental adversity speaks to the constraints imposed by using secondary data. A more robust measurement of parental adversity would include traumatic experiences such as childhood victimization. The proximal and distal links between childhood trauma and multiple unfavorable outcomes across the life course are well-established in literature. However, experiences of childhood trauma by the parents and their children were not assessed in this study. This is an important factor to consider in future models since not including it could underestimate the impacts of adversity on childhood socio-emotional outcomes. Finally, this study did not consider protective factors that could influence the direct influence of parental adversity and its pathways. Recognizing the importance of protective factors in developing family interventions, this limitation is addressed in a subsequent paper.

Conclusion

Jointly, the findings of this study illustrate a compromised foundation within which life trajectories are launched. They impose cumulative impacts on the vulnerability of young children from poor families, especially for African-Americans who are often at the intersection of health and racial disparities, putting them at a profound disadvantage. Racial disparities and variations in pathways of parental adversity suggest distinctive contextual issues that African-American families face, and have implications towards culturally responsive social work approaches and interventions for the prevention of unfavorable early socio-emotional outcomes. They reinforce the importance of two-generation prevention efforts where we begin to work with adults, even prior to the birth of their first child. Findings further underscore the need for government systems that serve children to consider a deliberate two-generation approach. This approach focuses on the needs of the child in conjunction with that of their parents.

Overall, the paradigm is shifting. With the growing amount of evidence regarding the biological embedding of stress, there is now a greater recognition of the central role of parents in their children's development. So in order to improve the lives of children we must work to transform the lives of those that care for them (Shonkoff et al., 2012).

Caring for the family has long been essential within the social work mission. Social work and allied professions can now more fully engage in concerted efforts to consider and address the needs of parents so we do not fall short in our mission to protect children and promote their health and wellbeing. This is particularly crucial for families of color who are often at the intersection of multi-form adversity and racial disparities and who are disproportionately represented in the child protection system.

Figure 2.1. Conceptual model hypothesizing direct and indirect pathways of parental adversity towards childhood socioemotional health.

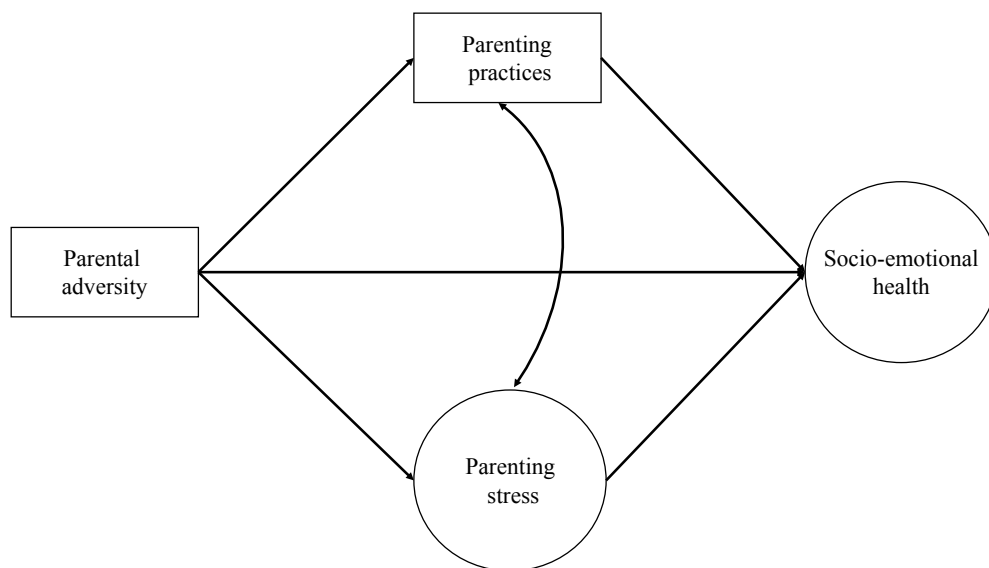


Table 2.1

Descriptive statistics for each individual indicator of parental adversity and for all main constructs in the SEM model by racial groups.

	African- American	Latinos	White		
	n = 2,326	n=1,336	n=1030		
	% or (M/SD)	% or (M/SD)	% or (M/SD)	X ² or (F)	p
Baseline					
Educational (family of origin)					
<i>High school and below</i>	72.2	88.8	65	167.43	0.000
<i>Above high school</i>	27.8	11.2	35		
Educational (participant)					
<i>High school and below</i>	69.4	76.6	55.5	338.9	0.000
<i>Above high school</i>	30.6	23.4	44.5		
No father involvement	30.2	27.3	18.8	48.69	0.000
From Wave 1					
13-item Material insecurity	1.22 (1.64)	1.09 (1.64)	1.06 (1.67)	3.38	0.017
<i>Food insecurity</i>	15.2	13.3	11.9	(6.86)	0.076
<i>Housing insecurity</i>	22.5	18.3	18	11.70	0.008
<i>Financial insecurity</i>	70.5	58.2	60	60.32	0.000
Partner incarceration	5.2	2.7	2.3	28.61	0.017
7-item intimate partner victimization	9.42	10.1	10.9	6.7	0.000
Maternal depression	13.5	10.6	11.5	7.03	0.071
Poor health status	7.8	10.4	3.82	136.77	0.000
<i>Total mean adversity score</i>	8.48 (5.10)	8.13 (4.78)	7.03 (4.83)	(26.22)	0.000
Parenting stress (Wave 3)	9.04 (2.74)	8.96 (2.74)	8.81 (2.34)	(2.41)	0.065
Parenting practices (Wave 3)	58.31 (10.64)	57.08 (11.13)	61.35 (8.64)	(29.81)	0.000
Socio-emotional health (Wave 5)	7.16 (5.35)	7.59 (5.83)	7.02 (5.37)	(1.80)	0.145

Table 2.2
Correlations between variables of interest in the structural model.

	PA	PS	PP
Parental adversity			
Parenting stress at wave 3	.107**		
Positive parenting practices at wave 3	-.036*	.187**	
Socio-emotional health at wave 5	.146**	-.232**	-.138**

Table 2.3
Summary of standardized direct and indirect effects of parental adversity on socio-emotional health.

	African-Americans			Latinos			Whites		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
Direct Paths									
PA-> SE	.103**	.063**	.166**	.085**	.003	.089**	.172**	.023	.195
PS -> SE	-.310**	.000	-.310**	-.192**	.000	-.192	-.327	.000	-.327
PP-> SE	-.054*	.000	-.054*	-.081**	.000	-.192**	-.081*	.000	-.081*
PA-> PS	.196**			.049			-.058		
PA ->PP	-.043*	.000	-.043*	.031	.000	.031	-.052	.000	-.052
Mediated Paths									
PA -> PS -> SE		.061**			.009			.019	
PA -> PP -> SE		.002			-	.006		.004	

Note: PA = parental adversity; SE = socioemotional health; PS = parenting stress; PP = positive parenting practices. DE = direct effect; IE = indirect effect; TE = total effect. * = $p < .06$; ** = $p < .01$

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PAPER 3

A LONGITUDINAL EXAMINATION OF THE ROLE OF PARENTAL ADVERSITY, PARENTING STRESS, AND INFORMAL SUPPORTS IN THE PARENTING CAPACITIES OF MOTHERS IN U.S. URBAN CITIES

Introduction

Parenting capacities are important considerations in adversity research especially within the context of early child socio-emotional development. Parents play a key role in early childhood development, as they become the immediate context of the child upon birth. For many children, this shared context is implicated in their exposures to early adversities and at times traumatic experiences. The Adverse Childhood Experiences (ACEs) study generated strong evidence regarding these early exposures, where more than half of the 13,494 adult participants reported having experienced at least one form of adversity. These adversities include experiences various forms of child maltreatment and exposures to mental illness, incarceration, substance abuse and violence in the home. Exposures to ACEs take place within the shared context of the household where the experiences of children are interlinked with the experiences of their caregivers, and points to the potential role of parenting as an intergenerational pathway of adversity towards less favorable outcomes (Mayes, 2011).

Further, more than a decade of research on adversity has generated robust evidence regarding the detrimental impact of ACEs on later adult health (Dube et al., 2003; Anda et al., 2002a; Felitti et al., 1998) and dysregulated stress response (Shonkoff, Boyce, & McEwen, 2010). When individuals are exposed to a potentially stressful experience, physiological responses are observed through increased heart rate, blood pressure, and heightened secretion of stress hormones, which are generally adaptive. But in the context of tremendous or unremitting

adversity, these physiological states may fail to return to baseline and the body's ability to cope with stress becomes compromised or dysregulated (Boyce & Ellis, 2005; McEwen, 2000). For parents exposed to disproportionately more adversities over the life course, compromised stress regulation may pose a greater challenge as they also contend with the demands of their parenting role that could become stressful (Green, Furrer, & McAllister, 2007). This could particularly become more difficult for the economically disadvantaged as they also struggle to provide for the basic needs of their children (Green et al., 2007). Further, this cumulative burden could potentially overwhelm and exceed the psychological and social resources of parents.

Given the compounding nature of adversities added to the demands of parenting, how are parents able to engage in their parenting roles? Commonly assessed experiences of adversity include exposures to partner incarceration, intimate partner violence, substance abuse, mental health problems, and socio-economic disadvantage which itself increases the risk of a range of economic insecurity and safety threats. Together, how are these adversities implicated in their parental stress and functioning? When some parents are left with very little option but to parent in the context of cumulative adversity, what are some of the potential sources of support that could help ease the pressures brought on by life-long adversities? I attempt to answer these questions by using the multi-wave Fragile Family and Child Well-being (FFCW) data to examine the links between parental adversity and parenting practices, and test the role of informal supports in attenuating some of the effects of parental adversity on parenting stress and parental capacities. I then compared these relations across three racial groups in the United States, namely African-Americans, Latinos, and whites.

Adversity and Parenting Capacities

Parents of more than 73 million children in the United States (U.S. Census Bureau, 2016) and experience both the rewards and challenges of parenting as they engage in their parenting role each day (Bornstein, 2001). Parents have a profound influence in the development and life trajectories of their children as they play a central role in shaping their social and physical environments. Many parents effectively fulfill their parenting responsibilities and are able to foster a safe and nurturing context of their children. However, the ever-expanding evidence from ACEs research reveals that this early foundation could get compromised as children are exposed to adversities early in the life course where exposures are linked to the adversities and stressful experiences of their parents. Further, evidence regarding cumulative experiences of childhood adversity reported by adults and their experiences of associated unfavorable health outcomes (Felitti et al., 1998; Kessler et al., 2010; McLaughlin et al., 2016) in adulthood allude to a potentially life long accumulation of adversities where effects could potentially spill-over in other life domains such as parenting. For these reasons, parenting is an important consideration, especially parenting capacities, or the capacity to engage in positive parenting practices, as it could become a long-term consequence of life-long exposures to adversity.

Parenting in Adversity

Parenting is hard work and the ability to adapt and cope with its demands is crucial in its successful execution (Deater-Deckard, 2008). However, for parents who have been exposed to lifelong adversities, the ability to adapt may be compromised by an already dysregulated stress response as they contend with continued adversities and associated stressful experiences. This is particularly problematic for parents of color who are disproportionately impacted by adversities such as poverty, involvement in the criminal justice system, family instability, and health

problems. The accumulation of these experiences could put parents at risk for greater stress in their caregiving roles.

Parenting and Economic Challenges

Singly, different types of adversities could cause strain on the stress response system, and some parents at higher risk for certain adversities may have already spent a lifetime of contending with these adversities. The lack of economic mobility of children in families within the lowest quintile of the income ladder serves as a good example of how economic challenges may continue across generations, and the persistent nature of certain adversities (Urahn et al., 2012). As parents try to cope with the pressures of poverty and lack of economic resources, their ability to effectively function in their parenting roles may be compromised (Pinderhughes, Nix, Foster, & Jones, 2001). Family stress theory explains (Conger, Rueter, & Conger, 2000; Conger, Ge, Elder, Lorenz, & Simons, 1994) how the lack of economic resources could impose strain on poor parents as they contend with the uncertainty of meeting their basic needs and of their children. Moreover, the lack of economic resources often dictates the types of neighborhood where families live. Negative neighborhood characteristics such as [but not limited to] the presence gangs, drug use, homicides, and substandard housing conditions have been linked to greater parental psychological distress, lesser parental warmth and engagement in positive and nurturing parenting practices (Gonzales et al., 2011; Kotchick, Dorsey, & Heller, 2005). This is of particular concern for African-Americans and Latinos who are disproportionately poor and living in poor quality neighborhoods (Kochhar & Fry, 2014).

Family Instability

Another commonly assessed adversity that may have implication on parenting stress and parental capacities is family dysfunction (referred to as family instability for the rest of this

paper). Family instability includes substance abuse, mental illness, criminal behavior, and violence in the home. The landmark ACEs study revealed that at least 25% of adults at the turn of the century have been exposed to a substance abusing parent in the home while almost 18% had a parent with mental illness (Felitti et al., 1998). Moreover, these numbers are potentially an underestimation of adults in the general population who have had exposures to family instability particularly because participants in the ACEs study only included adults who had access to medical care in a health management organization.

Family instability can lead to changing family structure particularly when families are exposed to parental incarceration. Disrupted family relationships become a domino effect and the consequential separations and additional caregiving burdens to the parents left behind could increase their levels of parenting stress. Additionally, disruptions in the family may also lead to greater material hardship that could intensify levels of parental stress, and consequently increasing risk for maladaptive parenting (Crnic, Low, & Bornstein, 2002; Osborne, Berger, & Magnuson, 2012). Adversity related to marital conflict such as the exposure of parents to intimate partner violence (IPV) could also threaten family relationships and increase parental stress (Anderson, 2008; Krishnakumar & Buehler, 2000). Specifically, exposure to intimate partner violence (IPV) impacts the parenting practices of mothers where current experiences of IPV are related to worse parenting scores (Casanueva, Martin, Runyan, Barth, & Bradley, 2008; Murray, Bair-Merritt, Roche, & Cheng, 2012). Notably, when women are no longer victims, their ability to engage in positive parenting practices significantly improves (Casanueva et al., 2008).

Parental psychopathology is an added burden for some parents and could further influence their capacity to fulfill their parenting roles. The evidence regarding the association

between internalizing and externalizing psychopathologies and problematic parenting practices is robust. Maternal psychopathology has been found to increase the risk for less effective parenting (Cummings, Keller, & Davies, 2005). Maternal depression, anxiety and substance abuse have all been implicated in harsher parenting styles, controlling and critical behaviors, and overprotectiveness of a parent towards the child (Caughy, Huang, & Lima, 2009; Van Der Bruggen, Stams, & Bögels, 2008; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Mothers with depression have been found to have lesser engagement in healthy feeding and sleeping practices with their baby (Field, 2010; Paulson, Dauber, & Leiferman, 2006). They are also more likely to spend less time with their children and engage in less affectionate parenting practices (Champion et al., 2009; Gerdes et al., 2007; Brook, Brook, Ning, Whiteman, & Finch, 2006).

The above factors could impose aggregated burden to parents, especially for those who are disproportionately exposed to some of these adversities. For example, African-American parents who may experience disproportionate family disruption as a consequence of the disproportionate incarceration of African-American males in the United States (Western & Wildeman, 2009). For parents already experiencing economic strain, the effects of unstable family circumstances may be greater, as the pressure compounds with the burden already imposed by poverty-related adversities.

Importance of Contextual Factors

Many of the contextual factors above overlap and often accumulate throughout the life course of parents. In addition to experiences of child maltreatment, it appears that these contextual factors have a profound influence on parenting. Despite the ever increasing evidence regarding these factors, only recently have we begun to consider their cumulative impact. These cumulative assessments such as the ACEs study and the Rochester Longitudinal Study mostly

focus on their aggregate impact of ecological risks on physical and mental health of adults and children (Felitti et al., 1998; Sameroff, 1998). Mackenzie and colleagues (2011) expanded the cumulative risk model by creating an index that included an ecology of factors such as age, family structure, level of education, social assistance, maternal depression, history of abuse, social assistance, and neighborhood factors. Although correlational in nature, their findings revealed that cumulative level of ecological risks were associated with worse family functioning. Despite continued interest in these ecological risk factors, knowledge regarding cumulative adversity and parental capacities is relatively underdeveloped. More importantly, somewhat less understood are the racial variations in these relations.

Cultural Influence in Parenting

Culture plays an important role in shaping parenting practices. Results from a study of acculturation and parenting practices reveals that immigration status and levels of acculturation are related to authoritative parenting styles of Mexican parents (Varela et al., 2004), while changes in parenting styles are observed across generation as families remain in the United States longer and a greater distance from their culture of origin is maintained (Driscoll, Russell, & Crockett, 2008). These findings allude to the importance of examining how cultural and ethnic background may influence some of the outcomes related to parenting. Collectivist culture such as Mexico may also have a distinctive assessment of good parenting when caregiving is shared among extended family members. The support of the extended family and fictive kin is often integral in families of color especially when the tasks of parenting are not only expected from birth parents but also from a close network of family and friends (Coll et al., 1996). These are important distinctions to consider for racial minority families especially since parental functioning is traditionally assessed based on mainstream understanding of parenting.

Why Social Support?

One of the three subsystems theorized in Belsky's process model of parenting behavior (1984) is context. He theorized that a large social support network would contribute to competent parenting, even when a child has problematic temperament (Belsky, 1984). In the general population, four decades of social support research confirm the positive effects of social support on physical and mental wellbeing (Taylor, 2011). Social support is defined as the perception that one is cared for, valued, and belonging to a mutually supportive social network (Wills, 1991). Experimental studies also demonstrate how the presence of a supportive person is associated with less stress as indicated by cardiovascular and HPA axis responses, including speeding up the return of cardiovascular functioning to pre-stress baseline (Christenfeld & Gerin, 2000; Christenfeld et al., 1997; Ditzen & Heinrichs, 2014; Uchino, 2006).

Given what we know about the positive effects of social support, researchers need to examine social support as a protective factor for parents who are at risk for or currently experiencing greater adversity. Efforts to examine protective factors should parallel the ever increasing interest in childhood and life course adversity. This is particularly important for parents who are at risk for the cumulative burden imposed by multiple adversities and the demands of their parenting role.

In addition to the direct positive effects of social support, past studies have shown social support as a promising protective factor against the negative effects of some forms of adversity. For example, social support has a protective role during financially challenging times and during difficult life transitions (Durden, Hill, & Angel, 2007; Cohen & Wills, 1985a; Kessler, Price, & Wortman, 1985). For individuals exposed to victimization, psychosocial resources in the form of emotional support moderates some of the deleterious effects of victimization (Hill, Kaplan, French, & Johnson, 2010).

Social support has also been shown to associate with parenting behavior, where positive social support predicted better relationships with offspring and better parenting skills across income levels (Feeney & Collins, 2015; Kotchick et al., 2005). Evidence also shows that the likelihood of depression among single mothers is inversely associated with a supportive social network (Rousou, Kouta, & Middleton, 2016; Wilmot & Dauner, 2016). But the buffering role of social support in the context of parenting stress is less supported. In a Swedish study of the multi-dimensional predictors of parenting stress, social support showed a direct effect on stress but there was no evidence to support the hypothesized moderating role (Östberg & Hagekull, 2000). In an unrelated study, social support was not significantly linked to parenting stress and no buffering effect was found on the inverse relationship between income and parenting stress (Raikes & Thompson, 2005). Additionally, findings from other studies suggest that social support for poor families may be less effective because of the number of stressors they face and may overstretch parent resources (Green et al., 2007; Ceballo & McLoyd, 2002).

This conflicting evidence points to potential differences in how social support impacts parenting that needs further exploring such as important racial/ethnic variations and variations in adversity accumulation. Many social support studies are cross-sectional using homogenous samples of white, middle class mothers (Green et al, 2007) and only a few compared results across different ethnic groups. Additionally, while there have been studies on the buffering effects of social support, they have been mostly conducted within a single stressor perspective. Less understood is the role of social support when adversities accumulate, whether it serves a protective role against the detrimental impact of unremitting adversities on worsening parenting stress and on compromising parenting capacities, particularly during critical periods of early childhood development.

Theoretical Foundations

The theoretical foundation of this paper rests on the theory of cumulative inequality (CI) (Ferraro & Shippee, 2009) and the main effects and buffering models of social support (Cohen & Wills, 1985b). Cumulative inequality theory recognizes that life course trajectories are shaped by the accumulation of risk, available resources, and human agency (Ferraro & Shippee, 2009, p. 334). It also underscores that long-term outcomes are subject to change and that the effects of adversity are not inexorable. Parenting capacities are examined through this framework (see Figure 3.1), testing the effects of cumulative adversity and parental coping resources in the form of social supports, whether social supports influence parental stress and parenting capacities and whether it moderates the hypothesized effects of adversity. Social support is conceptualized as a coping resource and defined as the social resources that individuals perceived to be available or that are actually provided to them by nonprofessionals in the context informal relationships (e.g. family members and friends) (Wills, 1991; Cohen & Wills, 1985). Believing that support from family or friends is accessible could help parents cope with some of the burdens imposed by adversities by lowering levels of parental stress that has been associated with competent parenting.

The main effects model of social support posits that support is beneficial to the individual regardless of the presence of a stressful event. The buffering hypothesis considers the potential interaction between stress and social support and hypothesizes that support acts as a buffer from the effects of stressors (Cohen & Wills, 1985). In this study, buffering refers to the role of the moderator in decreasing the effect of the predictor, where increasing moderator variable results in attenuated relationships between two variables. In the buffering model, appraisal is key, and perception of available support could influence the assessment of the potential gravity of a

stressor and may bolster an individual's perception of ability to cope with a particular stressor and its impending demands (Cohen & Wills, 1985).

This paper focuses on informal supports and tests its moderating role against the effects of cumulative adversity on worsening parental stress and parenting capacities. Additionally, past studies have shown that perception of support, even without actual receipt or utilization of support, accounts for its buffering effects in some populations (Cohen & Willis, 1985; Taylor, 2011) through psychological processes and mechanisms of appraisal, self-efficacy, self-esteem, distress, and sense of well-being (Berkman, Glass, Brissette, & Seeman, 2000; Cohen, 2004). This leads to further questions of whether variations in their effects could potentially be a function of race/ethnicity. Perceptions of support could vary based on race/ethnicity potentially influenced by related value orientations (e.g. *familismo* for Mexicans) that may also influenced their interactions with informal support systems such as their relatives and friends (DeGarmo & Martinez, 2006).

The Present Study

Compounding extant evidence and the predictive utility of the cumulative risk model, the present study combined multiple adversities in one index and tested whether cumulative parental adversity is associated with greater parenting stress (Hypothesis 1) and lower parental capacities (Hypothesis 2). Additionally, this paper examined the direct and moderating role of social support in the form of informal support to test whether social support is directly associated with parenting stress (Hypothesis 3) and parental capacities (Hypothesis 4); whether it moderates the effects of parental adversity on parenting stress and parental capacities (Hypotheses 5 and 6) and whether it moderates the effects of parenting stress on parental capacities (Hypothesis 7). In light of the robust evidence around racial disproportionality in the United States, racial variations are

expected in all of the hypothesized relation, with stronger associations expected for African-American mothers and Latina mothers.

Methods

Study Sample

In order to test the hypotheses outlined above, I used data from the Fragile Families and Child Wellbeing (FFCW) study. The FFCW is a birth-cohort longitudinal study of almost 5,000 parents and their children born in large U.S. cities from 1998 to 2000 (Reichman, Teitler, Garfinkel, & McLanahan, 2001). Forty% of the sample is African-American, non-Hispanic, 35% are Latinos, and 12% are immigrants. The study also included others who identified their racial background other than African-American, Latino, or white. These participants were excluded from this analysis given the focus on racial variations among the three major racial groups in the United States. A detailed description of the sample and the sampling strategy of the original study can be found in a previously published article (Reichman et al., 2001).

Measures

Parental capacity is the main outcome in this study. It was measured by assessing frequency of parents' engagement in activities with the child. The parent was asked the number of day per week they (1) sing songs or nursery rhymes to their child; (2) hug or show physical affection to the child; (3) tell their child they love him/ her; (4) let child help with household chores; (5) play imaginary games with their child; (6) read stories to the child; (7) tell stories to the child; (8) play inside with toys with the child; (9) tell child they appreciated what they did; (10) take child to visit relatives; (11) go to restaurant or eat out with their child; (12) assist child with eating; and (13) put child to bed.

The main predictor in this study is *parental adversity*. Informed by the predictive utility of a cumulative risk index, I created a cumulative index of 9 variables that included parental experiences of and exposures to educational disadvantage in their families of origin, level of education, partner incarceration, intimate partner violence, food insecurity, financial insecurity, unsecure housing, and maternal depression. Information for these items were collected from Baseline and wave 1. Adding together the 9 dichotomous variables produced a cumulative parental adversity (CPA) score for each of the participant. Cumulative parental adversity scores ranged from 0 to 9.

Another predictor of parental capacity considered here is *parental stress* (PS). Parental stress was measured using 4 items derived from the Child Development Supplemental Panel Study of Income Dynamics that measure parenting stress brought on by life changes (Fragile Families, n.d.). The PS scale includes the following Likert-scale type questions: (1) Being a parent is harder than I thought it would be; (2) I feel trapped by my responsibilities as a parent; (3) I find that taking care of my child(ren) is much more work than pleasure; (4) I often feel tired, worn out, or exhausted from raising a family. The items were later summed to create a PS score.

Nativity was measured based on participant report of where they were born. *Age* was based on mother's report of her age at baseline.

Analytical Approach

Descriptive statistical analyses were conducted for all the variables in this study. Bivariate correlations were then assessed among all the variables in the study. A series of hierarchical multiple regression analyses were conducted twice using ordinary least squares (OLS). The first regression analysis was conducted to assess the effects of CPA on parental

stress, and the protective role of social support. The other tested parenting practices as the main outcome variable. The first regression included only demographic variables of age and nativity. Their effects were subsequently controlled for in the models that followed. The succeeding regression analyses show a hierarchical approach where cumulative parental adversity and parenting stress were entered next, followed by adding a protective factor of perceived social support. In order to test the buffering role of social support, interaction variables were first created for the interactions between parental stress and social support; and between parental adversity and social support. The effects of these interactions were entered in the final model controlling for demographic variables of age and nativity. Model significance was assessed at each step using the F values and change in R^2 .

Results

Descriptive Statistics

Descriptive statistics of the sample are shown in Table 3.1. Of the 4,869 participants, 57% were African-Americans, 27% are Latinos, and 37% are whites. The mean age of the participants at baseline was 25.28 (range = 15 – 43). In terms of education, almost 65% of the sample reported having only completed high school or below. In general, more white mothers completed beyond high school education than the other racial groups.

Note that the mean parental adversity was 3.41, 3.28, and 2.86 for African-Americans, Latinos, and white, respectively. Almost all participants within each of the sub-sample reported experiencing adversity, with almost 98% of Latinos and more than 97% of African-Americans reporting at least one adversity. While a big proportion of the white sample reported at least one adversity (89.1%) it is significantly lower than the two racial groups. In a separate paper using the same constructs and data, more than half of the sample reported having experienced some

form of material hardship, and having a partner who has been incarcerated. A more detailed description could be found in an earlier paper that examined these variables in relation to childhood socio-emotional health (Borja, n.d.). Findings in that paper revealed significant racial group differences in each of the indicators of parental adversity in varying patterns. In the present study, results also revealed that parental adversity was more prevalent among immigrant Latinos compared to their U.S.-born counterpart.

Results further revealed that white mothers scored higher in parenting practices compared to the other racial groups. Latina mothers scored lowest, revealing a mean of 57.08. African-American scored only slightly higher with a mean of 58.31.

White mothers scored higher in social support with an overall mean of 4.88, with African-American mothers scoring the lowest at 3.72. More than 81% of white mothers score at or above the overall mean for social support compared to 60% and 62% for African-American mothers, and Latina mothers respectively.

Correlations

Results (Table 3.2) showed significant bivariate associations in the expected directions among all variables of interest. Similar patterns were observed among correlations in the racial sub-samples, therefore, only correlations for the full sample was reported here. Note that nativity was significantly correlated with the other variables in the study but only for the Latino sub-sample. This was expected since there was little variation in nativity in the African-American and white samples.

Regression Results

Results revealed several significant predictors of parenting stress (Table 3.3) and parental capacities (Table 3.4), and supported several of the hypothesized relations. Except for Model 1

for the white subgroup, changes in R^2 were significant and each model achieved significance at each of the regression step. Model 5 tested for the interaction between parental stress and social support. However, there was no significant improvement in the model based on F statistics and R^2 value. Therefore, Model 5 was dropped from the analysis and was not included on Table 4. The statistically significance models make the results in the final model interpretable.

One of the main goal of the present study is to test the role of social support in moderating the effects of parental adversity on parenting capacities as well as on parenting stress, and the moderating role of social support within these associations. Thus, results reported here are based on the final model that included a test of the interaction effects between parental adversity and social support, and the interaction between parental stress and social support.

Parenting Stress. Results (Table 3.3) showed that age was a significant predictor of parenting stress for African-American mothers, where younger age was associated with greater parenting stress, controlling for nativity, parental adversity, and social support. However, this association was not statistically significant for Latina or white mothers. Results supported the hypothesized link between parental adversity and parental stress, where each unit increase in parental adversity was associated with increase in parental stress, holding constant all the other variables in the model. This hypothesized link was supported across the 3 sub-groups. Results revealed the direct association of social support with parental stress, where each unit increase in support was linked to lower levels of parental stress.

Parental capacities. Results in Table 3.4 shows that being a younger parent was associated with lower scores in parental capacities. However, this result was statistically significant only for white mothers. As expected because of the greater variance in nativity among the Latino sub-sample, nativity was only a significant predictor for this sub-sample.

Findings partially supported the hypothesized relationship between parental adversity and parental capacities, where greater adversity showed an inverse association with parental capacities. However, this result was statistically significant only for white mothers. Results provide evidence to the hypothesized direct association between parental stress and parenting capacities, where greater stress was linked to lower scores in parental capacities. This association was significant for all 3 sub-groups.

Moderating role of social support. Very little evidence was found to support the hypothesized moderating role of social support against the effects of parental adversity on parenting stress (Table 4). This relation was not significant for African-Americans and Latinas. Further, results did not reach the standard alpha level of .05 for white mothers but it was significant at $p < .10$. The hypothesized moderating role of social support between cumulative parental adversity and parenting practices was partially supported, where higher perceived social support attenuated the effects of adversity and on parenting practices, but only for African-American mothers at the standard alpha of .05, and whites at .10 alpha level (Table 4). The evidence for social support's buffering role was not statistically significant for Latina mothers.

Discussion

The present study examined parental adversity as context of parental functioning, and the role of social support in mitigating adversity's debilitating effect. Findings supported the hypothesized links between parental adversity, parenting stress, parenting practices, and social support. Further, they revealed important distinctions between racial groups in the significance of the associations. Overall, mothers of color contend with greater adversity across multiple domains and experience higher parenting stress. They also reported lower parental functioning and perceived lower levels of social support. For these families, findings suggest that their

accumulated experiences of adversity are implicated in their worsening parental stress and lesser engagement with their children in their parenting role. Despite the evidence found in this study to support the attenuating effect of social support, this notion did not hold for Latina mothers.

The evidence provided here expands our understanding of the devastating impact of adversity beyond its well-established associations to long-term individual physical and mental health (Anda et al., 1999, 2002b; Chapman et al., 2004; Felitti et al., 1998; Kessler et al., 2010; Richards & Wadsworth, 2004). Just as early adversity exerts its long-reach on adult health outcomes, it is reasonably expected that some of its long-term, latent effects could also manifest as parental dysfunction (Mayes, 2011). Further, findings in the present study helps us to better understand the potential challenges that adults encounter in fulfilling their roles as parents. It encourages us to delve deeper in discovering protective factors such as social support as potential targets for preventive interventions. This study is among the first to examine racial variations in the effects of parental adversity on parenting stress and parental capacities, and the protective role of social support. Racial variations found in this study have implications towards culturally responsive considerations as we discover ways to halt, at the very least, some of the intergenerational effects of parental adversity on the early life course of children.

Racial Variations in Parental Adversity

In line with previous research regarding various racial disparities in the United States, mothers of color in this study accumulate more adversities and experience greater stress than their white counterpart. The prevalence of parental adversity was highest among African-Americans and Latinos. A greater proportion of mothers of color also reported above average exposures. This disparate accumulation reflects established evidence concerning some of the dimensions that make up the parental adversity measure used in this study. For example, people

of color are disproportionately represented in the U.S. criminal justice system (Pettit & Western, 2004). In particular, African-American males have the highest rates in arrest and incarceration (Harris, Steffensmeier, Ulmer, & Painter-Davis, 2009; Western & Wildeman, 2009). Latino males are similarly overrepresented (Harris et al., 2009). Given these past findings, it is not surprising that mothers of color in this sample are disproportionately exposed to partner incarceration. In another vein, racial wage gaps persist in the U.S. African-Americans and Latinos lag behind whites and Asians in income, earning \$6 to \$7 dollars less per hour based on the 2015 Current Population Survey data (Patten, 2016). Economic hardship is considered a form of adversity in this study. Findings regarding greater economic hardship among African-American and Latina mothers is consistent with population-level evidence that point to wealth and income disparities where people of color, with the exception of Asians, are at the bottom of the income ladder. Predictably, more mothers of color end up struggling with the consequences of limited economic resources, such as their inability to provide enough food on the table and to secure or maintain adequate housing. These adversities that pile-up in their lives become the context from which they fulfill their parenting role.

Racial Variations in Parenting Stress

Given the buildup of adversities through the life course, the higher levels of parenting stress experienced by mothers of color in this study is somewhat expected. Results suggest that cumulative parental adversity is directly implicated in the increasing levels of parental stress. This finding extends what we currently know regarding the significant links between individual adversities and parenting stress. For example, socioeconomic disadvantage and poverty has been previously linked to higher perceived stress and psychological distress among poor mothers (Goyal et al, 2010, Cohen, 1993, Steptoe et al 1996). These families are often subject to the

chronic nature of poverty as they contend with the strain brought on by persistent financial problems. For many, poverty is also intergenerational. Many of the mothers in this sample were potentially exposed to socio-economic disadvantage as children as indicated by the lower educational attainment of their own parents. In addition, evidence shows that many of the families are impacted by partner incarceration. This could, in part, also explain the association between parental adversity and parenting stress. As shown in previous studies, parental incarceration is associated with greater instability in the family (Western & Wildeman, 2009). Thus, it is reasonably plausible that mothers forced into single parenthood as a result of partner incarceration could experience greater stress as they are left to contend with parenting challenges single-handed.

Adversity and Parenting Stress

This finding is among the first to shed light on racial variations regarding the association between cumulative parental adversity and parenting stress. As expected, the influence of parental adversity on parental stress only holds true for African-American and Latina mothers. This finding extends current knowledge regarding the many disparities in the United States where people of color are impacted (Sternthal, Slopen, & Williams, 2011; Mauer, 2011; Williams & Mohammed, 2009; Braveman & Barclay, 2009; Kahn, Wilson, & Wise, 2005). In addition to the disproportionate exposure of mothers of color to adversities, they also bear the impact of these adversities on the intensity of their parenting stress. Their accumulation of adversities speaks of the various challenges with which mothers of color have to contend, that, in turn, could influence their experiences of parenting. Regardless of adversities, parenting in itself at times can be onerous. Accumulated adversities are an added burden that further amplifies the

expected pressures of parenting. This is particularly problematic for African-Americans and Latinos who are at the intersections of many economic and health disparities.

Using cumulative inequality theory as a guide, I argued that the accumulation of parental adversity could shape parenting outcomes such as parenting practices. As hypothesized, findings support this notion and reveal that increased parental adversity is linked to lesser engagement of mothers in positive parenting practices with their children. Unexpected, however, is the statistical significance for the African-American and Latina sub-samples and not for whites. The significant association holds true regardless of their age, nativity, and levels of parenting stress. As previously stated, existing literature points to the many long-term effects of adversity on adult outcomes, particularly within physical and mental health domains as well as early mortality (Tyrka, Price, Marsit, Walters, & Carpenter, 2012; Brown et al., 2009; Dube et al., 2001). Experiences of stressful major life events and daily hassles are almost always associated with less adaptive parenting behaviors (Crnic et al., 2002). For example, economic hardship and the resulting distress can influence maternal adaptation to parenting roles for new mothers, including neural sensitivity when their babies cry (Kim, Capistrano, & Congleton, 2016). Findings from this study extend current evidence regarding adversity by revealing that the accumulation of parental adversity is also potentially responsible for some of the variations in the engagement of mothers of color in positive parenting practices. The evidence points to the exacerbation of their parenting burdens caused by a combination of economic hardship, partner incarceration, intimate partner violence, mental health issues, and other related difficulties.

How, then, could mothers actively engage in positive parenting practices when they must also contend with the burden imposed by a lifetime of unrelenting adversities? The non-significant finding for the white sub-sample triggers additional questions. Why is adversity

implicated for mothers of color? What are the potential variables not modelled in this study that could fully or partially account for the link between adversity and parenting practices for white mothers? The lack of significance for this particular group begs for further testing of pathway models to examine potential mediators that could serve as targets for future interventions.

Informed by the buffering hypothesis model, the present study tested the hypothesized interaction between social support and parental adversity and parenting stress. The buffering hypothesis theorizes that social resources in the context of informal relationships could act as protection against the effects of stress caused by stressful experiences or adversities (Cohen, Mermelstein, Kamarck, & Hoberman, 1985; Cohen & Wills, 1985). However, as with other studies (Östberg & Hagekull, 2013; Raikes & Thompson, 2005), the present study did not find evidence to support this notion. The lack of statistically significant role must be considered in light of the limited measure of social support in this study. The social support measure was assessed using the sum of dichotomous questions that were limited to participant perception of having someone they could count on for economic and emergency support. A more robust measure of social support such as the Medical Outcomes Study Social Support Survey (MOS-SSS) could yield different results.

As suggested from previous studies, it is possible that the number of stressors exceed the positive benefits that could come from support systems (Ceballo & McLoyd, 2002). Further, social supports which could contribute economically and during certain emergencies may not be sufficient to reduce the stress brought on by chronic adversities, such as the “daily hassle” of not having enough to eat, or the uncertainty of having a roof over their head for the next month, in addition to the pressures of having an incarcerated partner and experiencing victimization. The unremitting nature of these adversities could, in turn, deplete available social resources and may

result in weakening support systems and dwindling support (Green et al., 2007). Nevertheless, findings support the main effects model of social support, where higher perceived social support was directly associated with lower parenting stress levels. This is contrary to findings from previous studies that found no support for the direct effects of social support on parenting stress (Raikes & Thompson, 2005). Despite the lack of evidence to support the protective role of social support against adversity, it remains a promising resource towards directly reducing parental stress.

The final purpose of this study was to test the role of social support in moderating the impact of parental adversity on parenting practices and examine racial variations between African-Americans, Latinos, and whites. Findings suggest that social support could play a protective against the potential negative impact of adversity of parenting practices. It is important to note that the statistically significant role of social support only holds for African-American mothers and for whites, though not at the standard alpha level of .05. Based on the results of the present study, we could speculate that as parents perceive the availability of material support and help from members of their informal support systems during emergencies, they are more likely to engage in positive parenting. The significant association of parental stress with parenting practices for African-American and white, but not Latinos allude to a potential mediating role of parental stress between social support and parenting practices, particularly since social support did not moderate the effects of parental adversity on parenting stress for this group. As such, perceived social support could directly function to lower parental stress, though other factors unaccounted for in the present model could also account for some of the association. Lower levels of parenting stress could increase the capacities of mothers to engage in positive parenting practices even in the context of mounting adversities. Mothers, whose energies are otherwise

depleted by these adversities, could find that knowing they have access to supportive people could make a positive impact on their capacities to engage in positive parenting practices with their children.

The non-significant finding regarding the protective role of social support among Latina mothers was expected, given the non-significant association between parental adversity and parenting capacities. Nevertheless, this needs further consideration. First, the lack of significance could be that the effect of perceived social support on parenting capacities is too small for detection in this sub-sample. Additionally, it is plausible that actual support and not perceived support may play a direct and moderating role against adversity's impact on the parenting practices of Latinos, and not perceived social support. Further, their perceptions of support could be different from that of their African-American and white counterparts as their value orientations could influence their perceptions of and interactions with their support systems (DeGarmo & Martinez, 2006). For example, values of *familismo* could determine the type of social support systems that matters in the buffering of adversity's unfavorable impacts for Latinos. These notions remain relatively untested. Finally, there are measurement considerations to take into account, particularly regarding measurement of parenting practices for Latinos. It is possible that some of the items included in the measurement are not culturally congruent to the parenting practices of Latina mothers. Future studies should consider developing and testing culturally-informed ways to measure parenting practices among Latinos.

Limitations

Findings from the present study should be interpreted in the light of several limitations that mostly stem from the restrictions common in using secondary data. First, this study did not consider the bi-directional relationship between parental stress and parental functioning. There is

some evidence regarding the transactional relationship between parenting stress and parenting practices where these two variables simultaneously escalate as the other deescalates. Future studies should consider alternative models that test for bi-directionality as parental stress could be an antecedent and consequence of poor parental functioning and vice versa. Second, experiences of child maltreatment were not assessed. Results from retrospective and longitudinal studies suggest that exposure to child abuse and neglect has a significant long-term impact on physical and mental health in adulthood, and increases vulnerability for further victimization (Anda et al., 2006; Arias, 2004). Therefore, the estimated effects of parental adversity in the present study are conceivably underestimated and conservative. Similarly, exposures to substance abuse in families of origin was not included in the parental adversity measure. Future studies should consider including assessments of substance abuse in families of origin to test for its potential long-term legacy on parental functioning.

Perceptions and experiences of discrimination and racism are also missing from the model in this study. A growing body of evidence suggests that racial discrimination as a psychosocial stressor is linked to unfavorable health outcomes (Williams & Mohammed, 2013, 2009). Accordingly, the role of racism and discrimination as potential predictors of parenting stress and parental functioning is highly plausible. Moreover, the increasing sentiments against certain immigrant groups in the United States implores the consideration of racism and discrimination in future models that assess their negative impacts on parenting practices.

Finally, there are measurement limitations in this study. The preceding statements allude to some of the ways that we could improve our measurement of cumulative parental adversity. Parental stress measure is also limited. The four items included in this measure falls short in assessing a broader spectrum of parental difficulties related to the individual indicators of

parental adversity that may include experiences related to minority stress. Future research should consider including neighborhood characteristics in a cumulative parental index, particularly because past studies have shown that they could undermine the engagement of parents in positive parenting practices (Gonzales et al., 2011; McDonnell, 2007; Kotchick et al., 2005). Additionally, the cultural congruence of the parental practices measure among Latina mothers remains unclear. Nevertheless, findings in this study underscore the implication of parental adversity in the parental functioning of mothers and the direct and buffering role of social support for some. These findings have important implications for social work research and practice.

Implications

Parents become the immediate context of children upon birth. Healthy and resilient parents are pivotal to the establishment of a solid foundation for the healthy development of their children. Findings from the present study suggest that in order for us to address the needs of children, we must simultaneously tackle the needs of their parents. We start by deepening our understanding the context of their parenting role. This study revealed a context characterized by exposures to many adversities. Of special concern are the observed disparities in these exposures where mothers of color are found to disproportionately carry the burden of these adversities. Future research must take serious efforts to assess racism and discrimination and how they serve to influence parenting stress and functioning, and compromise the early context of child development. Findings also suggest the need for further research to identify protective and resilience-fostering factors unique to the racial groups that could be targets for intervention development. Social support is a potential protective factor for African-American and white mothers. Further research that includes conceptual and measurement work is necessary to examine more closely social support among Latinos.

Additionally, findings regarding racial variations in parental functioning and its predictors suggest more work is needed in developing culturally congruent measures of parenting practices and functioning. There is also a need to consider life-course adversities in assessing parental functioning to better understand how the capacities of caring and nurturing parents could be compromised. This is particularly useful within the child welfare system (CWS) where families of color are overrepresented. Parents in these families are disproportionately accumulating adversities. They are potentially overtaxed by unremitting adversities and their parental functioning compromised. When CWS come into contact with these families, they must deliberately assess the cumulative burden brought on by lifelong exposures to adversities. In this manner, we begin to have a broader understanding of what has been traditionally labelled as “parenting failures”. Then, as we recognize the adverse context from which parents try to fulfill their parenting role, we may also begin to better address the root causes of what brought these families to the attention of CWS in the first place. There is value in educating parents of how to become better parents. However, together with evidence from prior studies, findings in this study indicate the need for us to do better by moving away from the traditional information-behavior change approach towards addressing some of the structural causes, such as poverty, that could compromise the capacities of parents, especially families of color, to provide a safe and nurturing developmental context for their children.

Conclusion

Just as adversity imposes its lifelong effects on adult physical and mental health, I argued in this paper that adversity has parallel negative effects on parental functioning. Informed by cumulative adversity theory as well as models of main effects and buffering, I hypothesized that perceived social support could play both direct and protective roles towards reducing the impacts

of adversity on parental functioning. Further hypothesized are the racial variations between African-Americans, Latinos, whites, where mothers of color were hypothesized to have greater experiences of parental adversity and consequently worse parental functioning. Findings partially supported these hypotheses. Evidence supported the notion that parental adversity is linked to worse parental functioning but only for mothers of color in the sample. Further, social support emerged as an important resource for mitigating some of the impacts of parental adversity on parental functioning, but only for African-American and white mothers. Racial variations indicate the distinctive experiences and cumulative burdens of mothers based on their racial group membership. These findings underscore the importance of considering racial and ethnic backgrounds as we further delve into the various life outcomes associated with adversity. This is especially salient for research focusing on families at risk for greater exposures to adversity and who are at the intersections of many disparities and multiple systems involvement. Despite the damaging effects of adversity, evidence from this study support the notion that its effects are not inexorable. Social support is but one of the many potential targets for interventions to help parents safely care and nurture their children. The capacity of many parents to engage in positive parenting practices despite incessant adversities allude to resilience that needs further empirical attention, especially within racial sub-samples of parents and children. The deliberate approach of this work to focus on parents recognizes that achieving breakthrough outcomes for children means transforming the lives of the adults that care for them (Shonkoff, 2014).

Figure 3.1

Conceptual model depicting hypothesized relations and expected direction of the associations.

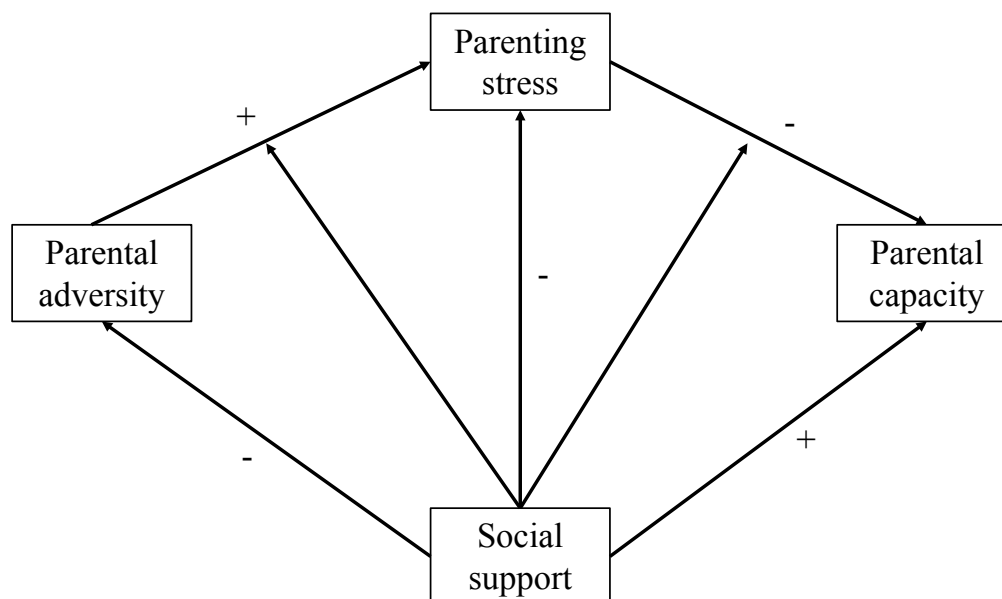


Table 3.1

Descriptive statistics among African-Americans, Latinos, and whites including test of group mean difference.

		African- Americans	Latinos	Whites
	Range	% or M (SD)	% or M (SD)	% or M (SD)
Age*	(15-43)	24.56 (5.77)	24.81 (5.77)	27.10 (6.5)
Parenting stress*	(1-16)	8.88 (2.81)	8.57 (2.77)	8.40 (2.28)
Parental adversity*	(0-9)	3.41 (1.67)	3.28 (1.6)	2.86 (1.84)
At least 1 parental adversity*		97.2	97.8	89.6
Parental adversity (above mean)*		47.4	41.5	36.2
Social support*	(0-6)	3.72 (1.84)	3.83 (1.81)	4.88 (1.55)
Social support (at and above mean)*		60.60	62.1	81.4
Parental capacities***	(0-77)	58.31 (10.64)	57.08 (11.13)	61.35 (8.64)

*Note: * $X^2 < .0$. Italics mean the variable was transformed dichotomously.*

Table 3.2

Bivariate correlations among all variables in the model.

Correlations					
	Nativity	Age	Parental adversity	Parental stress	Social support
Nativity					
Age	-0.129				
Parental adversity	0.117	-0.212			
Parenting stress	0.015	-0.046	0.164		
Social support	0.045	0.082	-0.283	-0.155	
Parenting capacities	0.158	-0.023	-0.071	-0.125	0.155

Note: Bolded = Correlation is significant at the 0.01 level (2-tailed test).

Table 3.3

Results of hierarchical regression testing for the association between parental adversity and parenting stress and the moderating role of social support within these associations.

Independent variable	African-American Parenting Stress				Latino Parenting Stress				White Parenting Stress			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	β	β	β	β	β	β	β	β	β	β	β	β
R ²	.005	.036	0.055	0.055	0.001	0.015	0.023	0.024	0.001	.029	.033	.037
F	4.539	23.143	26.877	21.491	0.228	4.684	5.402	4.396	0.456	8.543	7.198	6.545
Age	-0.068	-0.043	-0.050	-0.049*	-0.020	-0.006	-0.006	-0.010	0.004	-0.058	-0.065~	-0.186***
Nativity	0.010	0.012	-0.009	-0.009	0.007	0.016	0.016	0.017	0.003	0.021	0.641	0.058~
Parental adversity		-0.181***	0.144***	0.140**		0.122***	0.105**	0.065		0.177***	0.153***	0.186
Social support			-0.142***	0.146*			-0.092**	-0.138~			-0.065~	0.263***
Parental adversity x social support				0.005				0.059				-0.204~

*Note: * $p < .05$; ** $p < .01$; *** $p < .001$; ~ $p < .10$.*

Table 3.4

Results of hierarchical regression testing for the association between parental adversity and parental capacities and the moderating role of social support within these associations.

Independent variable	African-American				Latino				White			
	Parental capacities				Parental capacities				Parental capacities			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	β	β	β	β	β	β	β	β	β	β	β	β
<i>R</i> ²	0.001	0.013	0.031	0.035	0.069	0.091	0.098	0.098	0.023	0.070	0.084	0.088
F	1.201	5.661	10.85	10.152	29.225	19.7	17.074	14.229	9.552	15.073	14.594	12.726
Nativity	0.036	0.041~	0.037	0.039	0.249***	0.247***	0.243***	0.242***	0.051	0.061~	0.062~	0.058~
Age	-0.007	-0.015	-0.014	-0.017	-0.041	-0.054	-0.048	-0.049	0.142***	0.165***	-0.179***	-0.186***
Parental adversity		-0.062*	0.028	0.095~		0.083*	0.066~	0.044~		-0.065~	-0.191	0.186
Parental stress		-0.081**	-0.062**	-0.062*		-0.116**	-0.107**	-0.107**		-0.197*	-0.192***	-0.196***
Social support			0.140***	0.284***			0.086*	0.111			0.129***	0.263***
Parental adversity x social support				-0.176*				0.032				-0.204~

*Note: * $p < .05$; ** $p < .01$; *** $p < .001$; ~ $p < .10$.*

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CONCLUSION

This dissertation examined the accumulation of parental adversities and its proximal consequences during early childhood. It also examined pathways of adversities towards the socio-emotional health of young children. The buffering role of informal supports as sources of social support was also examined. Lastly, racial group differences were tested across these associations. Findings partially supported the hypothesized relations, and reveal several key findings. First, findings showed that families of color are accumulating more adversities throughout the life course and their children had worse socio-emotional health compared to their white counterparts. Additionally, higher levels of adversity was associated with worse health outcomes and this was true for African-Americans, Latinos, and whites. Findings also revealed differences in pathways of adversity across the three racial groups. The mediating role of parental stress and parental capacities were significant only for African-Americans. Lastly, findings show that social support can buffer some of the effects of adversity on parenting stress and capacities but only for certain racial groups.

Utilizing a two-generation approach, this dissertation simultaneously focused on parental factors and childhood outcomes. Rather than focus only on children, it recognizes that their socio-emotional wellbeing (and other outcomes) are nested within their families and the immediate informal social network of their families. This research project is part of a larger framework that informs my scholarship, where individual difficulties are given context, from the immediate family to the outer circles of social networks, communities, and socio-political structures. It encourages research and practice to rethink our approaches and shift focus from just the children or the parents as individuals towards a greater understanding of the broader context of their difficulties. Using cumulative inequality theory to scaffold this project's main research

objectives, it further recognizes that life histories including intergenerational histories of disadvantage and adversities are important considerations in understanding parental resilience and capacities, especially within systems such as child welfare that tend to be punitive towards those that are disproportionately impacted by adversities.

The two-generation approach of this dissertation embraces the idea of “prevention as an instrument of social justice” (Kenny & Hage, 2009). It aims to put a greater emphasis on context and its role in shaping trajectories of parents and children. It also places importance on culture and ethnicity as an important context of adversity and resilience. A social justice prevention approach to research is about finding the “causes of the causes” (Prilleltensky & Nelson, 1997) and therefore as knowledge of the long reach of early adversity on adult outcomes expands, this dissertation unpacks this relationship further through a longitudinal and two-generation approach. Results from this dissertation will inform future research that focuses on building capabilities of parents, especially parents of color who are at the intersection of multi-form adversity and racial disparities and disproportionately represented in child welfare and criminal justice systems. If we really want to achieve breakthrough outcomes for children facing significant adversity, then we have to transform the lives of the adults who care for them” (Shonkoff, 2012).

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Sharon Borja**Curriculum Vitae**

University of Washington School of Social Work
4101 15th Ave. NE,
Seattle, WA 98105

sborja@uw.edu
(510) 205-5251

EDUCATION

PhD	University of Washington <i>Dissertation: A longitudinal study of the effects of intergenerational adversity on the parenting capacities of Latina and African-American mothers and the wellbeing of their children.</i>	May 2017 (expected)
MSW	San Francisco State University (Specialization: Individuals, Families and Groups)	May 2008
BS	University of the Philippines, <i>Cum Laude</i> (Major: Social Work)	June 1996

FUNDING

The Warren G. Magnuson Scholarship	2015-2016
Warren G. Magnuson Institute for Biomedical Research and Health Professions Training	
TL1 Multidisciplinary Pre-doctoral Clinical Research Traineeship	9/2014-9/2016
National Institutes of Health/Institute for Translational Health Science	6/2012-9/2012
Clinical Translational Science Award (TL1 TR000422)	
National Institute of Mental Health Prevention Research Traineeship	2012-2014
NIMH Prevention Research Training Grant (T32MH20013)	

AWARDS, HONORS & FELLOWSHIPS

Inter-professional Education Teaching Fellow	2014-2015
Graduate School Fund for Excellence and Innovation Travel Award	7/2014, 10/2014
Society for Prevention Research Minority Travel Award	5/2013, 2014
Graduate Equity Fellowship	8/2008
CalSWEC Mental Health Stipend	8/2007-5/2008
San Francisco County Behavioral Health Multicultural Stipend	8/2007-5/2008

RESEARCH FOCUS & EXPERIENCE

Interests

Prevention of child maltreatment; intergenerational adversity and resilience; parent capabilities and child wellbeing; intersectionality; culturally grounded social work interventions; social work in the global context; quantitative and mixed methods research.

Experience

Research Analyst 5/2014 – present

University of Washington School of Social Work

Washington State Behavioral Risk Factor Surveillance System (PI: Paula Nurius)

Utilize multivariate statistical analysis to examine intergenerational patterns of adversities.

Research Analyst 9/2012 – present

UW School of Social Work, SUNY Buffalo and Pierce County Juvenile Court

Pierce County Juvenile Court Project (Preceptor: Paula Nurius)

Conduct analysis using court administrative data to examine the impact of adverse childhood experiences on mental health among court-involved youth.

Co-Principal Investigator 10/2013 – 3/2016

University of Washington School of Social Work

Mentoring in Social Work Doctoral Programs Study

Developed and implemented a qualitative study of mentoring relationships among doctoral students and faculty mentors in Social Work.

Research Analyst 9/2012 – 9/2014

University of Washington School of Social Work/Partners for Our Children

Parent Child Study (PI: Mark Eddy)

Analyzed data using Structural Equation Modeling to examine pathways of cumulative adversity and inequality among incarcerated parents.

Research Assistant 9/2012 – 6/2014

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

Youth Violence Prevention (El Salvador, Guatemala, Honduras) (PI: J. Mark Eddy)

Assisted in launching research partnership with GIZ in Central America.

Research Assistant 9/2011 – 6/2012

Partners for Our Children/University of Washington

Analyzed data regarding parental incarceration and parent-child relationship outcomes.

Principal Investigator 9/2007 – 5/2008

San Francisco State University

Help-seeking and Intimate Partner Violence Study

Conducted qualitative research on help-seeking of Filipino women & intimate partner violence.

PUBLICATIONS

- Borja, S.,** Nurius, P., & Eddy, JM. (2015). Adversity across the life course of incarcerated parents: Gender differences. *Journal of Forensic Social Work, 5*:1-3, 167-185.
- Nurius, P. S., Green, S., Logan-Greene, P., & **Borja, S.** (2015). Life course pathways of adverse childhood experiences toward adult psychological well-being: A stress process analysis. *Child Abuse & Neglect, 45*, 143-153. PMID 25846195.
- Miller, K., Eddy, JM., & **Borja, S.** (Forthcoming). Variations in the life histories of incarcerated parents by race and ethnicity: Implications for service provision. *Smith College Studies in Social Work.*
- Borja, S.,** Nurius, P., & Eddy, JM. (Under review). Intergenerational adversity and mental health of incarcerated parents: A structural equation test of an intergenerational model. *Journal of Family Social Work.*
- Logan-Greene, P., Tennyson, R., Nurius, P. & **Borja, S.** (Under review). Adverse childhood experiences, protective factors, and mental health among court-involved youth. *Child and Youth Care Forum.*
- Borja, S.** & Nurius, P. (Accepted). Abstract proposal: A longitudinal test of parental stress and parenting capacities as pathways of parental adversity towards well-being. *British Journal of Social Work 2017 Special Issue.*

In progress

- Borja, S.** (In progress). Crossing borders: The transnationalization of families and social work. Target journal: *International Social Work.*
- Borja, S.** (In progress). Left behind after adoption: Maternal perspectives on the legal termination of parental rights. Target journal: *British Journal of Social Work*
- Borja, S.** (In progress). A longitudinal examination of parenting stress among African-American families with young children. Target journal: *Child and Family Social Work.*
- Borja, S.,** Nurius, P., Song, C., & Lengua, L. (In progress). Adverse childhood experiences and life course trends: Socioeconomic, health, and intergenerational implications. Target journal: *Child & Youth Services Review.*
- Teyra, C., **Borja, S.** & Hsieh, W.H. (In progress). Promoting healthy indigenous communities: The roles of indigenous cultures & traditional practice. Target journal: *Health & Social Work.*

Other Publication

Borja, S. (2008). Help-seeking patterns of immigrant Filipino women survivors of intimate partner violence. San Francisco State University: Master's Thesis.

PEER-REVIEWED PRESENTATIONS

Borja, S., Teyra, C., Valdovinos, M. & Willey-Sthapit, C. (Under review). *Critical issues in transnational social work research*. 2017 European Conference for Social Work Research, Aalborg, Denmark.

Borja, S. (Accepted). *Pathways of early life adversity towards later parenting self-efficacy of Latina and African-American mothers*. Paper to be presented at the 2017 Society for Social Work Research Annual Conference, New Orleans, LA.

Borja, S. & Eddy, J.M. (Accepted). *Assessing pathways of cumulative adversity towards incarcerated parents' mental health*. Paper to be presented at the 2017 Society for Social Work Research Annual Conference, New Orleans, LA.

Borja, S. (2016, May). *Intergenerational adversity and early childhood well-being: A longitudinal examination of adversity's developmental consequences among African-American and Latino children*. Paper presented at the Society for Prevention Research Annual Meeting, San Francisco, CA.

Borja, S., Rodriguez-Jenkins, J., & Fernandez, A. (2015, October). *Meeting halfway: Doctoral student and faculty mentoring relationships*. Paper presented at the Council for Social Work Education, Denver, Colorado.

Borja, S. & Eddy, JM. (2015, May). *Early life adversity and parenting self-efficacy: Examining the mediating role of child maltreatment and adult victimization*. Poster presented at the Society for Prevention Research Annual Meeting, Washington DC.

Borja, S. (2015, April). *Predictors of parental stress among mothers in US urban cities: Variation by race/ethnicity*. Paper presented at the Translational Science 2015 Meeting, Washington DC.

Borja, S. (2015, April). *Left behind after adoption: Maternal perspectives on termination of parental rights*. Poster presented at the European Conference for Social Work Research 2015, Ljubljana, Slovenia.

Logan-Greene, P., Nurius, P., & **Borja, S.,** & Tennyson, R. (2015, January). *Adverse childhood experiences, protective factors, and mental health problems among court-involved youth*. Paper presented at the Society for Social Work and Research Annual Conference, New Orleans, LA.

- Rodriguez-Jenkins, J., & **Borja, S.** (2015, January). *Predictors of parenting stress in early childhood: A test of heterogeneity among Latino mothers*. Paper presented at the Society for Social Work and Research Annual Conference, New Orleans, LA.
- Borja, S.**, Nurius, P., Feldman, B., & Eddy, JM. (2014, October). “*When it rains it pours*”: *Testing a life course model of adversity*. Paper presented at the Council on Social Work Education’s 60th Annual Program Meeting, Tampa, FL.
- Logan-Greene, P., Nurius, P., **Borja, S.** & Tennyson, R. (2014, July). *Adverse childhood experiences & mental health problems among youth on probation*. Paper presentation at the National Organization of Forensic Social Work Annual Conference, New York, NY.
- Borja, S.**, Nurius, P., & Eddy, JM. (2014, July). *Double jeopardy: Cumulative adversity and constrained support among incarcerated parents*. Poster presented at the National Organization of Forensic Social Work Annual Conference, New York, NY.
- Eddy, J.M., Shortt, J., Seeley, J., Martinez, C., Holmes, A. ... & **Borja, S.** (2014, June). *Randomized trial of the relief nursery program: Three-year outcomes*. Poster presented at the Third Biennial American Psychological Association Division 45 Research Conference, Eugene, OR.
- Eddy, J.M., Martinez, C., Cearley, J., Herrera, D., Kjellstrand, J., ... & **Borja, S.** (2014, June). *Randomized trial of a professional mentoring program: Three-year outcomes*. Poster presented at the Third Biennial American Psychological Association Division 45 Research Conference, Eugene, OR.
- Borja, S.**, Eddy, M., & Nurius, P. (2014, May). *Physical and mental health among incarcerated parents: Testing a life course adversity model*. Poster presented at the Society for Prevention Research Annual Conference, Washington, DC.
- Logan-Greene, P., Kim, E., **Borja, S.**, Hernandez, I., & Nurius, P. (2014, January). “*ACEs*”-*informed subgroups among youth in the “pipeline to crime”: A latent class analysis*. Paper presented at the Society for Social Work and Research Annual Conference, San Antonio, TX.
- Borja, S.**, Eddy, M., & Nurius, P. (2013, May). *Effects of cumulative disadvantage on the psychosocial health of incarcerated parents*. Poster presented at the Society for Prevention Research Annual Conference, San Francisco, CA.
- Logan-Greene, P., **Borja, S.**, Hernandez, I., Kim, E., & Nurius, P. (2013, April). “*Histories of trauma and social disadvantage in the juvenile justice system: a partnership between the courts and researchers*”. Paper presented at the National Organization of Forensic Social Work Annual Conference, Seattle, WA.

TEACHING INTEREST AND EXPERIENCE

Interests

Social work practice with individuals and families; child welfare social work practice; human behavior in the social environment; multicultural social work practice; research methods; and evidence-based practice.

Experience

Global and Local Inequalities: Critical Analyses of the Processes and Policies of Globalization (Graduate Course) Fall, 2016
UW School of Social Work, Sole Instructor

Poverty and Inequality (Graduate Foundational Course) Fall, 2015
UW School of Social Work, Sole Instructor

Child and Family Inequalities: Policy/Services Platform (Graduate Course) Fall, 2014
UW School of Social Work, Co-instructor (Co-instructor: Peter Pecora, PhD)

Multi-generational Practice with Children & Families (Graduate Course) Spring, 2013
UW School of Social Work, Teaching Intern (Instructor: Maureen Marcenko, PhD)

Health Policy (Graduate Course) Winter, 2013
UW School of Social Work, Instructional Assistant (Instructor: Melissa Martinson, PhD)

Invited University Lectures (2009-present)

University of Lapland, Rovaniemi, Finland
Transnational considerations among Latino families and adverse experiences.

UW School of Social Work, Seattle, WA
Globalization and the transnationalization of families.
Human development considerations in child welfare.
Embodiment mechanisms of life course adversity.
Prevention in the child welfare system.

San Francisco State University School of Social Work, San Francisco, CA
Challenges in child welfare practice.

Undergraduate Student Supervision (2016)

Cinthia Piedra, BASW Honors Research Project

PRACTICE EXPERIENCE

Post-MSW Experience

Child Protective Services Social Worker & Expert Witness 6/2008 – 10/2011
Santa Clara County Department of Family and Children's Services
 Provided court-ordered family reunification and permanency planning services for children and families and provided expert testimony regarding child welfare cases.

Post-BSW Experience

Eligibility Worker 2/2006 – 8/2007
San Francisco Department of Human Services
 Assessed client needs and eligibility to participate in the Cal-works program.

Mental Health Specialist 6/2005 – 2/2006
Asian Community Mental Health Services
 Provided counseling and case management services to Filipino adults with mental illness.

Youth Development Officer 7/2003 – 6/2005
Private Industry Council of San Francisco
 Provided case management services & career counseling for youth, ages 12-24.

Case Manager 9/2001 – 7/2003
Cross-cultural Community Services Center
 Provided early intervention counseling and case management services to at-risk youth.

Community Development Organizer 8/1996 – 4/1997
World Vision Development Foundation, Philippines
 Facilitated community project operations & conducted community-based participatory research.

REVIEWER ACTIVITIES

Journals

Trauma, Violence & Abuse
The American Psychologist

Conference

Society for Prevention Research

Institutional Review Board

University of Washington Human Subjects Division (2012)

UNIVERSITY SERVICE

Doctoral Program Mentoring Committee	2012 – present
PhD Program Admissions Committee	2014 – 2015
Graduate Education Mentoring for Underrepresented Students	2014 – 2015
Health Sciences Library Advisory Committee, <i>Social Work Representative</i>	2013 – 2015
Search Committee for PhD Assistant Director, <i>Member</i>	2013
Doctoral Program Student Mentor	2012 – 2015
Social Welfare Doctoral Program Steering Committee <i>Elected student representative</i>	2012 – 2014
Doctoral Program Social Justice Committee, <i>Member</i>	2012 – 2014

COMMUNITY SERVICE

World Health Organization Global Campaign for Violence Prevention Meeting <i>Geneva Headquarters, Geneva, Switzerland</i>	9/2015
JB Scholarship, Philippines, <i>Founder</i>	2016
Habitat for Humanity, <i>Ad-Hoc Grant Reviewer</i>	2005
McKinley School District Truancy Intervention Program, <i>Board Member</i>	2002 – 2003

PROFESSIONAL AFFILIATIONS

Council for Social Work Education
 European Social Work Research Association
 National Organization of Forensic Social Work
 Society for Prevention Research
 Society for the Psychological Study of Culture, Ethnicity, & Race
 Society for Social Work and Research

LANGUAGES

Ilocano (Native language)
 Tagalog (Native language)
 Spanish (Advanced)
 English (Fluent)