Poverty and Parenting: Exploring Ecological Interactions

by

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Abstract

Decades of research have demonstrated that parents and children living in poverty are at higher risk for adversities, including intimate partner violence (IPV), material hardship, and exposure to community violence. There is, in turn, research linking IPV, material hardship, and community violence exposure to negative outcomes in children. One mechanism that may link poverty-related adversities to child outcomes is parenting. Thus, there is a need for a deeper understanding of how contextual factors associated with poverty influence parenting, particularly in vulnerable communities. In addition, it is important to identify how parenting may protect children living in poverty from later maladaptive outcomes. In the current dissertation, I explore how contextual adversities (namely, intimate partner violence and material hardship) influence parenting in low-income largely African American and Latino families. I also examine how parenting may serve as a protective factor for low-income Latino and African American adolescents exposed to community violence. I found associations between IPV and parenting, and limited evidence of a link between material hardship and parenting. In addition, I found an association between community violence exposure and adolescent attitudes about violence, though it appears that parent-child cohesion had a sensitizing effect. These findings are strengthened through the use of multiple approaches and methods, including structural equation modeling, constructs with multiple informants, and qualitative analyses. Taken together, these highlight the need for broad structural-level change aimed at improving the lives of families living in poverty and reducing racial disparities in health and wealth.

Chapter 1: Introduction to the Dissertation

Decades of research have demonstrated that parents and children living in poverty are at higher risk for adversities both within the home and in the community relative to their more affluent counterparts. Within the home, lower income is associated with higher likelihood of intimate partner violence (IPV), with male to female violence being the most common (Aizer, 2010; Angelucci, 2008; Bobonis, Castro, & Gonzales- Brenes, 2013). As family income decreases, families are also more likely to experience hardships such as not having enough food or having utilities turned off because of inability to pay bills (Boushey, Brocht, Gundersen, & Bernstein, 2001; Amey, 2000). At the neighborhood level, children living in poverty are more likely to be exposed to community violence, both as witnesses and victims (Evans & English, 2002; Foster, Brooks- Gunn, & Martin, 2007; Sampson et al., 1997).

There is, in turn, research linking IPV, material hardship, and community violence exposure to negative outcomes in children. Studies of long-term effects have shown that childhood exposure to IPV is associated with increased risk for delinquency, greater mental health problems, and the potential for intergenerational violence in dating and intimate partner relationships (D'Andrea & Graham- Berman, 2017; Ehrensaft, 2008; Kinsfogel & Grych, 2004; Milletich, Kelley, Doane, & Pearson, 2010).

Research has also demonstrated negative associations between material hardship and children's social and cognitive development (Family Life Project Investigators, Kainz, Willoughby, Vernon-Feagans, & Burchinal, 2012; Gershoff, Aber, Raver, & Lennon, 2007). Community violence exposure is consistently associated with a host of negative outcomes for

children and adolescents, such as symptoms of depression (Ceballo, Ramirez, Hearn, & Maltese, 2003; Kennedy, Bybee, Sullivan, & Greeson, 2010; Lambert et al., 2010; Shahinfar, Fox, & Leavitt, 2000; Turner, Finkelhor, & Ormond, 2006; Zinzow et al., 2009), anxiety (Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Horowitz, McKay, & Marshall, 2005), and posttraumatic stress (Aisenberg, Ayón, & Orozco- Figueroa, 2008; Allwood & Bell, 2008; Cooley-Quille et al., 2001; Denson, Marshall, Schell, & Jaycox, 2007; Scarpa, Hurley, Shumate, & Haden, 2006; Zinzow et al., 2009). Thus, poverty is a serious public health concern that leaves families vulnerable to a myriad of risk.

Though the harmful effects of poverty are felt across racial and ethnic groups, it is well-established that poverty disproportionately affects African American and Latino families, due in part to centuries of systemic racism and oppression (Bullock, 2008; Feagin, 2004; Lovell, 2008). Racial discrimination directly impacts socioeconomic status via disparities in access to quality education, sound housing, gainful employment, and other resources (Jones, 2001; Williams, Lawrence, & Davis, 2019). As such, African American and Latino children are twice as likely to live in households classified as poor or low-income and two to three times more likely to live in deep poverty than White children (National Center for Children in Poverty, 2018), and are thus at increased risk for experiencing material hardship (Rodems & Shaefer, 2020). Furthermore, there is evidence that minority women in poverty are disproportionately affected by intimate partner violence (Angelucci, 2008; Tjaden & Thonnes 1998). Finally, racial/ ethnic minority adolescents living in poverty consistently report disproportionately high levels of community violence exposure (CVE); Gibson, Morris, & Beaver, 2009; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). In order to create interventions and policies aimed at reducing racial disparities and assisting families of color navigating the painful realities of poverty, it is important to

examine how poverty-related stressors influence parents and children, as well as to explore mechanisms of resilience.

One mechanism that may link poverty-related adversities to child outcomes is parenting. Although parenting can be conceptualized and measured in a variety of ways, many researchers in the field think about parenting in terms of two broad domains: positive and negative. 'Positive parenting' is an umbrella term used to refer to dimensions of parenting such as warmth, sensitivity, limit setting, appropriate scaffolding, and contingency-based reinforcement (Bradley and Corwyn, 1999, Waller et al., 2015). 'Negative parenting,' in turn, refers to parenting behaviors that are inconsistent, over-reactive, controlling, and especially, harsh (Chang et al., 2003; Lovejoy et al., 2000). It should be noted that positive and negative parenting are separable constructs and not simply two ends of the same dimension (Baumrind, 1997; Lunkenheimer et al., 2017). Cross-culturally, parenting that is low in positivity and high in negativity has been consistently linked to negative child outcomes such as lower levels of social competence, lower academic achievement, difficulties with emotion regulation, and elevated levels of internalizing and externalizing behavior problems. In contrast, parenting that is sensitive and positive has been linked to adaptive child outcomes across these same domains (Belsky and Fearon, 2002, Dishion et al., 2008, Leerkes et al., 2009). As poverty has been associated with parenting practices that are more negative and less positive (Grant et al., 2003), there is a need for a deeper understanding of how contextual factors associated with poverty influence parenting, particularly in vulnerable communities. In addition, it is important to identify how parenting may protect children living in poverty from later maladaptive outcomes.

Theoretical Frameworks

This dissertation uses several theoretical frameworks to: (1) Explore associations between parenting and two distinct family-level adversities in African American and Latino families living in poverty, and (2) Explore the role of parenting as a protective factor for African American and Latino children exposed to community violence.

Process Model of Parenting

Belsky's (1984) process model of parenting posits that parenting is determined by a combination of parents' own psychological resources, child characteristics, and contextual sources of stress and support (e.g., social networks, family, neighborhood). In his model, Belsky noted that a true ecological perspective of parenting must consider not only the parent and child, but the broader social and economic context in which the relationship occurs. Moreover, Belsky proposed that in buffering the parent–child interactions from stress, a parent's psychological resources are more important than the contextual sources, which in turn are more important than the characteristics of the child in predicting parenting behavior. A 2018 review demonstrated empirical support for the model (Taraban & Shaw, 2018) and updated the model by including moderating pathways between each of the domains. Conceptualizing parenting as a product of complex, interactive, and interwoven factors is likely best suited for predicting its features and course (Gallagher, 2002), with more research needed to increase our understanding of the mechanisms underlying links between contextual predictors and parenting.

Family Stress Model

The Family Stress model (FSM; Conger & Donnellan 2007; Conger et al. 1992, 1994) provides a useful framework for understanding the mechanisms through which the stress of poverty impacts parents and undermines parental functioning. Originally informed by research

linking economic stress to marital functioning (Elder, Conger, Foster, & Ardelt, 1992), Conger and colleagues extended this model to study how stress within the family influences socioemotional development in children (Conger et al., 1993, 2010). The basic form of the FSM posits that: (1) economic hardship (e.g., job loss, low income-to-needs) generates economic pressure, defined as the psychological experience of material hardship and food insecurity; (2) such economic pressure translates into parent psychological distress, including maternal depression and substance use, which (3) impacts marital and parent-child relationship quality as measured by inter-parental conflict and parenting behaviors; finally, (4) greater marital instability and parenting characterized by high harshness and low warmth leads to maladaptive youth emotional and behavioral problems (Conger & Conger, 2002; Conger et al., 1993, 2010; Conger, Ge, Elder, Lorenz, & Simons, 1994; Masarik & Conger, 2017).

Ecological- Transactional Model of Community Violence

Building on Bronfenbrenner's model of embeddedness of contexts (1979), Ciccheti and Lynch (1993) proposed an ecological-transactional model of community violence. Their model posits that individual development takes place within co-occurring mutually influencing levels of the environment (macrosystem/culture, exosystem/neighborhood, and microsystem/family). In their original elaboration of the model, Ciccheti and Lynch theorized that community violence is a feature of the exosystem that can act as a risk factor for the occurrence of violence within the microsystem/ family. Conversely, the presence of protective factors at any level of the ecology may help to explain why some children display successful adaptation in the face of violence within their communities (Harden & Koblinsky, 1999).

Dissertation Theoretical Model

Figure 1 shows the broad theoretical model that guides the current dissertation. Similar to Belsky's process model (1984), the current model posits that parenting is determined by social, economic, and parent characteristics. In line with the Family Stress Model (Conger et al., 1994), the model also proposes mediating pathways between social and economic factors and parenting via the effect of these factors on parent psychological resources. Lastly, the model stipulates that all interactions between contextual stressors (such as material hardship and community violence), parent resources, parenting, and child characteristics are embedded within a broader socioeconomic context (Bronfenbrenner, 1979). In addition to combining these theoretical models, the model also includes the presence of contextual supports as a buffer on the relation between contextual stressors and parenting, as well as between contextual stressors and child characteristics. It should be noted that not every pathway in this model will be tested, as doing so would be beyond the scope of the dissertation.

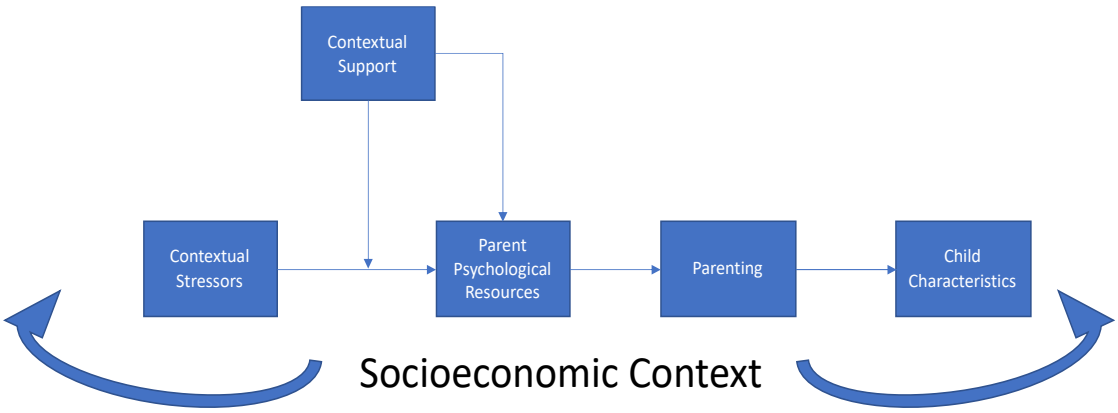

Figure 1: Dissertation theoretical model

One of the features of the current model is that both child and parent are embedded within context. Given the racial-ethnic disparities that exist in rates of poverty, ethnicity is an important contextual feature that will be referred to throughout the current dissertation. I use the term ethnicity as opposed to race as ethnicity is a more inclusive social category, referring not only to physical phenotype but also cultural, linguistic, religious, and national origin or background. It is important to clarify that when controlling for ethnicity in the current dissertation, I am controlling for differences in opportunity and exposure to discrimination, as well as culturally-rooted differences in norms, values, and patterns of behavior (Jones, 2001).

Constructs of Interest

Figure 2 shows proposed pathways between constructs that will be explored in the current dissertation.

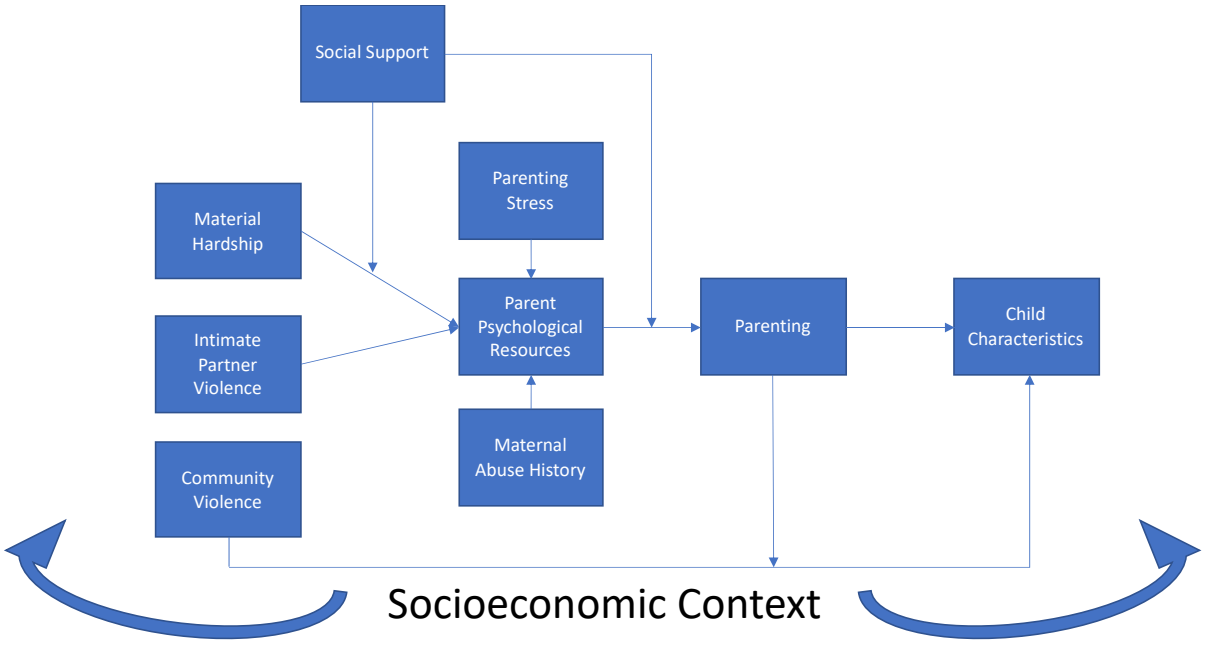

Figure 2: Proposed pathways between constructs

Intimate Partner Violence

One of the factors that determines parenting is the quality of parental relationships. As such, the presence of intimate partner violence (IPV) in the home poses a threat to parental well-being and functioning. In line with this notion, a 2018 meta-analysis of 21 studies examining the effects of IPV victimization on parenting found that victimization was associated with more negative parenting behaviors (e.g., physical punishment, disengagement), and fewer positive parenting behaviors (e.g., responsiveness, sensitivity) (Chiesa et al., 2018). One mechanism through which IPV victimization might influence parenting is parenting stress. That is, IPV victimization likely adds to maternal stress by draining the mother of the emotional resources needed to parent effectively. The spillover hypothesis (Engfer, 1998) proposes that the mood and emotions generated from a woman's adult intimate relationships will flow into and affect other significant relationships, including her relationship with her child. Consistent with this hypothesis, the amount of parenting stress experienced by women in abusive partner relationships is higher than that of women in nonviolent relationships (Holden & Ritchie, 1991; Kalil, Tolman, Rosen, & Gruber, 2003; Levendosky & Graham-Bermann, 1998; Wolfe, Jaffe, Wilson, & Zak, 1985).

Though these studies provide evidence that parenting stress is an intermediary between IPV exposure and poor parenting outcomes, the current literature has several limitations that may limit the generalizability of findings, such as limited work done with non-clinical samples, small sample sizes, and lack of attention to Latino parents. Furthermore, though it is generally thought that proximal experiences are more predictive of behavior than distal ones (Martin & Martin, 2002), there is evidence that a mother's lifetime history of IPV may impact parenting in different ways than a recent history, and that a mother's history of childhood abuse might confer additional risk for parenting challenges. Thus, there is a need for more studies that examine how

the timing of IPV affects parenting, as well as how a history of childhood abuse might sensitize mothers to the effects of IPV on parenting and parenting stress.

Material Hardship

Another potential source of stress to be considered are the financial and social resources of the parent. There is evidence that the negative impact of economic disadvantage on children and adolescents substantially derives from economic influences on the emotions and behaviors of parents or other caregivers (K. J. Conger et al., 2000; McLoyd, 1998). One of the features of the FSM is that it positions material hardship as a more proximal indicator of family economic circumstance and predictor of parenting than income alone. Consistent with the Family Stress Model, there is some evidence that material hardship, over and above income, predicts parenting behaviors (Gershoff et al., 2007), though many studies examining the effects of poverty on parenting have focused on more distal measures of economic well-being such as family income or poverty threshold (Radey, 2018), making this an area that needs more exploration. As not all parents exposed to material hardship experience parenting challenges, it is also important to examine potential protective factors for parents experiencing material hardship. Material hardship is likely to undermine parenting only to the extent that it stresses the parent. If buffering resources like social support are present, then material hardship may not predict parenting. There is a wealth of research showing that social support benefits parents broadly (Grav, Hellzen, Romild, Stordal, 2012), and parents living in poverty specifically (Radey, 2018). However, more research is needed exploring different facets of social support as they relate to parenting in the context of poverty, with the goal of providing additional insight into the role of informal support in the lives of families living in poverty.

Community Violence Exposure (CVE)

In order to inform intervention strategies for low-income youth exposed to community violence, it is important to identify specific mechanisms through which CVE influences later outcomes. One way CVE might impact outcomes is through its effect on how children think about violence and the use of aggression. Dodge and colleagues (Dodge et al. 1990; Crick & Dodge 1994) proposed a model of social information processing (SIP) which draws on social and cognitive theories of interpersonal interaction (Selman 1971; Newell & Simon 1972). In an elaboration of the last two stages of SIP, Fontaine and Dodge (2006) proposed a model of response evaluation and decision (RED) in which responses are evaluated, assigned outcome expectancies, and compared and prioritized for ultimate response selection. From a theoretical view, community violence exposure may impact children's response evaluation and decision making through social learning mechanisms and coercive cycles (Bandura, 1986; Patterson, 1982). That is, children may learn that violence is an acceptable response to threat and imitate aggressive behaviors they have witnessed others commit. Numerous studies have demonstrated that CVE leads children to adopt attitudes in favor of violence (Guerra, Spindler, & Huesmann, 2003; Goldweber, Bradshaw, Goodman, Monahan, & Cooley-Strickland, 2011).

However, not all children who are exposed to community violence develop negative outcomes. Building on Bronfenbrenner's model of embeddedness of contexts (1979), Cicchetti and Lynch (1993) proposed that the presence of protective factors at any level of the ecology may help to explain why some children display successful adaptation in the face of violence within their communities (Harden & Koblinsky, 1999). To the best of my knowledge, no study has examined how positive parenting might buffer the effects of community violence exposure on children's attitudes about violence specifically; however, several studies have shown that warm and nurturant parenting attenuates the links between CVE and other negative outcomes

(Brookmeyer, Henrich, and Schwab- Stone, 2005; Gorman-Smith, Henry, & Tolan, 2004; Hardaway, McLoyd, & Wood, 2012; O'Donnell, Schwab-Stone, & Muyeed, 2002). As the vast majority of work examining parenting in the context of CVE has operationalized parenting as *maternal* parenting, there is a paucity of research examining how biological fathers and father figures may confer additional support to children exposed to community violence. Nevertheless, there is evidence that fathers do contribute to child outcomes broadly, and in the context of CVE specifically (Dubowitz, & Starr, 1999; Ozer & Weinstein, 2004). Another methodological challenge to consider is that all the aforementioned studies have used exclusively quantitative methods to address these research questions. Though beneficial to advancing our understanding of CVE's impacts on youth, survey measures may not fully capture the nuances of adolescents' attitudes about violence- particularly racial-ethnic minority adolescents. Qualitative work addressing CVE and subsequent attitudes about violence in racial/ ethnic minority adolescents can aptly address some of these knowledge gaps (Morrow, 2007; Nelson & Quintana, 2005).

Specific Aims of this Dissertation

The current dissertation explores how contextual sources of stress (namely, intimate partner violence and material hardship) influence parenting in low-income largely African American and Latino families. It also examines how parenting may serve as a protective factor for low-income African American and Latino adolescents exposed to community violence. The proposed studies have several strengths. Firstly, all the proposed studies benefit from the use of large and well-sampled cohorts with African American and Latino parents and children from the community. Additionally, by using material hardship as opposed to family income, I am using a more proximal measure of family circumstance. Furthermore, the use of child and observational report can highlight dynamics that the parent may not report, as well as dynamics that are

difficult to capture in self-report measures, such as nonverbal behaviors, tone, and withdrawal (Gardner, 2000). Study 3 will be one of the first to examine the influence of paternal parenting on the relations between CVE and attitudes about violence. Lastly, the dissertation will incorporate qualitative data, which is effective in examining complex psychological phenomena as it is not constrained by predetermined variables.

Study 1: Intimate Partner Violence

Aim 1. Examine the extent to which the recency and severity of IPV are associated with parenting stress and parenting behaviors in a large community sample of IPV-exposed low-income Latina and African American mothers of children aged 0-14.

Aim 2. Examine the role that timing of IPV plays in these associations by testing whether women who have experienced IPV in the past year differed in their parenting stress and parenting behaviors compared to women with less recent IPV exposure.

Aim 3. Test whether the relations among IPV, parenting stress, and parenting behaviors differ according to whether mothers have a history of childhood physical or sexual abuse.

Study 2. Material Hardship

Aim 1. Test the relation between material hardship and parenting in a sample of 237 low-income families of adolescents using child and observational report of parenting.

Aim 2. Test whether maternal social support moderates the effects of material hardship on parenting.

Study 3. Community Violence

Aim 1. Test whether parent-child cohesion (both maternal and paternal) moderates the association between CVE and attitudes about violence in a sample of low-income urban Latino and African American adolescents.

Aim 2. Incorporate qualitative data to explore and better understand adolescents' perceptions about the positive benefits related to violence.

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Chapter 2: Intimate Partner Violence and Parenting: Examining the Roles of Parenting Stress, Timing, and Maternal Abuse History

Introduction

Intimate partner violence (IPV) - defined as psychological, physical, or sexual harm by a romantic partner (Centers for Disease Control and Prevention [CDC], 1999) is a serious preventable public health problem. It is estimated that 10 million Americans experience IPV in a given year, with women being the most common victims (Basile et al., 2010). In situations in which there are children within the household, IPV exposure is associated with negative outcomes for both the mother and child, including depression and anxiety (Stewart & Vigod, 2017; Woolhouse et al., 2012), externalizing problems (Vu et al., 2016), and poor physical health (Campbell & Lewandowski, 1997). Though there is evidence that IPV affects children via increased child abuse potential from the perpetrator (Herrenkohl et al., 2008), IPV may also impact children via its impact on the IPV victim's parenting capacities. In a 2018 meta-analysis examining the effects of IPV victimization on parenting, IPV victimization was associated with more negative parenting behaviors (e.g., physical punishment, disengagement) and fewer positive parenting behaviors (e.g., responsiveness, sensitivity) (Chiesa et al., 2018). As parenting that is harsh and low in warmth is linked to child outcomes such as conduct problems, attachment difficulties, and executive function (Briere et al., 2017; Gershoff, 2010; Gustafsson et al., 2015), IPV is a major public health problem for both survivors and their children. It is thus important to examine factors that may explain how, and for whom, IPV victimization affects parenting.

Intimate Partner Violence and Parenting Stress

Central to the development of interventions for mothers exposed to IPV is the identification of mechanisms linking IPV to parenting outcomes. One way in which IPV victimization might influence parenting is by increasing maternal stress, and thus draining the mother of the emotional resources needed to parent effectively. The spillover hypothesis (Engfer, 1998) proposes that the mood and emotions generated from a woman's adult intimate relationships will affect other important relationships, including her relationship with her child. Consistent with this hypothesis, the amount of parenting stress experienced by women in abusive partner relationships tends to be higher than that of women in nonviolent relationships (Fogarty et al., 2019; Holden & Ritchie, 1991; Levendosky & Graham-Bermann, 1998; Tailor et al., 2015). Furthermore, the frequency of IPV victimization is linked to higher levels of mothers' parenting stress (Huth-Bocks & Hughes, 2008; Levendosky & Graham-Bermann, 1998; Renner, 2009). Belsky's process model of parenting (Belsky, 1984) proposes that a parent's psychological resources are critical in predicting parenting behavior. Consistent with this idea, there is evidence that the effects of IPV on parenting are mediated, to some degree, by parenting stress, with additional evidence linking increased parenting stress to increased spanking and over-reactivity (Holden et al., 1998; Huth-Bocks & Hughes, 2008), and decreased positive discipline (Huth-Bocks & Hughes, 2008), warmth (Renner, 2009) and physical affection (Holden & Ritchie, 1991).

Though these studies provide evidence that parenting stress is an intermediary between IPV exposure and poor parenting outcomes, the current literature has a number of limitations which may limit the generalizability of findings. First, most of the studies that have examined the role of parenting stress for mothers with histories of IPV have used clinically-referred samples,

specifically mothers living in shelters (see Holden & Ritchie, 1991; Holden et al., 1998; Huth-Bocks & Hughes, 2008; Kalil et al., 2003; Levendosky & Graham-Berman, 1998). As women in shelters or referred for services are a specific subset of the population, there is a need for studies with non-clinical samples to determine how these findings generalize to other communities. In addition, with a few exceptions (e.g., Renner, 2009; Taylor et al., 2009), most studies examining associations between IPV and parenting stress have had small sample sizes (*n*s= 74 to 190) and have focused primarily on African-American or European-American participants, leaving the need for more work with large samples of women exposed to IPV, including participants identifying as Latino. IPV research that uses large representative samples is critical for the development of treatments, policies, and practices for mothers exposed to IPV that are empirically supported, cross-culturally valid, and that reflect mothers in the community, not just those that present to clinics or shelters.

Timing Effects of Intimate Partner Violence

In addition to understanding the mechanisms through which IPV impacts parenting, it is important to consider how the effects of IPV exposure may change with time among survivors of IPV. Though the spillover hypothesis posits that recent or current experiences of IPV affect parenting the most, prior work has demonstrated that even a lifetime history of IPV can have lingering effects on parenting (Casanueva et al., 2009; Casanueva et al., 2008; Coohey & O'Leary, 2008; Levendosky & Graham- Bermann, 2006; Loucks & Shaffer, 2014; Renner, 2009). Moreover, it is unclear which specific domains of parenting are most affected by a mother's recent IPV, as opposed to a mother's long-term history of IPV exposure. In their meta-analysis of studies examining the effect of IPV on parenting, Chiesa and colleagues (2018) highlighted two main methodological issues of past work that prevented them from examining

the role of timing of IPV exposure among survivors. First, they found that only a third of studies explicitly indicated whether the IPV items used for analyses referred to lifetime or recent (i.e., past year) IPV, and second, that only two studies specifically examined differences in parenting depending upon timing of IPV exposure. In a 3-wave sample of predominantly African American mothers receiving public assistance, Barrett (2010) found that past year IPV exposure uniquely predicted higher endorsement of physical punishment relative to mothers with less recent IPV, whereas IPV exposure that occurred over a year ago predicted less warmth. This study thus provided evidence that recent versus past IPV may differentially affect distinct dimensions of parenting among mothers exposed to IPV. However, Barrett only measured IPV at the first wave, making it unclear whether the longitudinal associations that were found could be explained by maternal IPV exposure that persisted after the first wave.

Similarly, in a study of over 3,000 families, Kelleher et al. (2008) found that both past year and lifetime maternal IPV exposure were associated with higher self-reported psychologically aggressive disciplinary practices relative to mothers without histories of IPV. In contrast, they found that only past year IPV was associated with self-reported physically aggressive and neglectful disciplinary practices. However, this study was cross-sectional and utilized a sample of families referred to child welfare system for substantiated abuse. These studies point to the need for longitudinal studies of community samples that examine separate domains of parenting, and IPV and parenting at multiple waves. Furthermore, there is a need for more studies addressing how timing of IPV exposure differentially impacts parenting among survivors of IPV, and not simply in comparison to non-exposed mothers.

Mothers' History of Childhood Abuse

Finally, not all parents subjected to IPV experience greater parenting stress or parenting challenges. Key to informing interventions is to identify parents who might be at particularly high risk for having IPV impact their parenting behaviors. One potential factor that may influence whether IPV affects parenting behaviors is the parent's own history of abuse. That is, a mother with a history of childhood abuse may be more sensitive to stress broadly (Pereira et al., 2012) and particularly sensitive to the negative effects of IPV.

Linking developmental history to parenting, Belsky (1984) theorized that a parent's developmental history would have an important impact on their abilities to sensitively parent their children. In line with Belsky's model, researchers have identified associations between mothers' history of childhood physical and sexual abuse and a range of self-reported maladaptive parenting outcomes, including lower parenting competence, greater parenting stress, aggressive conflict management, and the use of less effective parenting styles (Alexander et al., 2000; Banyard, 1997; Cohen, 1995; Cole et al., 1992; Douglas, 2000; Moehler et al., 2007; Ruscio, 2001, Schuetze and Eiden, 2005). However, no study has examined how a mother's childhood abuse history might moderate the relationships among IPV, parenting stress, and parenting behaviors. Incorporating maternal history of abuse can help us understand how childhood abuse history may make mothers who have experienced IPV particularly vulnerable to parenting stress and the negative outcomes associated with it.

The Current Study

The goal of the current study was to examine the extent to which the frequency and recency of IPV are associated with parenting stress and parenting behaviors in a large community sample of IPV-exposed low-income Latino and African American mothers of children aged 0-14 years (N=1159). By using a large, well-sampled, archival dataset, we were

able to test relationships among the frequency and timing of IPV, parenting stress, and parenting outcomes among mothers with histories of IPV exposure both cross-sectionally and longitudinally using structural equation modeling. First, we examined associations among the frequency of IPV, parenting stress, and parenting behaviors by testing indirect pathways through which the frequency of IPV predicted maladaptive parenting via increasing maternal parenting stress. Second, we examined the role that timing plays in these associations by testing whether women who have experienced IPV in the past year differed in their parenting stress and parenting behaviors compared to women with less recent IPV exposure. Finally, we tested whether the relations among IPV, parenting stress, and parenting behaviors differed according to whether mothers had a history of childhood physical or sexual abuse. We focused on three parenting behaviors – firm-responsiveness, spanking, and disengagement – as they capture both positive and negative aspects of parenting and have been associated with maternal IPV exposure (Levendosky et al., 2006; Riser, 2009).

We used factor analysis to confirm the structure and separability of these parenting constructs. Additionally, as one goal was to examine the extent to which findings generalized across mothers who identified as African American versus Latino (who have been under-represented in this research), we ran tests of measurement invariance to test whether parenting constructs were measured similarly across each racial/ethnic group and age of child (early childhood versus early adolescence) -- a key measurement issue often ignored in studies with heterogeneity in participant backgrounds. We then used structural equation modeling to examine these associations within and across time with relevant covariates. Finally, we tested whether mothers' history of childhood abuse moderated the associations of IPV with parenting stress and parenting behaviors. We hypothesized that greater frequency of IPV exposure would be

associated with higher levels of negative parenting behaviors and lower levels of positive parenting via increased parenting stress. In addition, we hypothesized that mothers who reported IPV in the past year would endorse higher levels of parenting stress than mothers with less recent IPV exposure. Finally, we hypothesized that associations among IPV exposure, parenting stress, and parenting behaviors would be stronger for mothers who reported a history of childhood abuse than for mothers without a history of childhood abuse.

Method

Participants

For the present study, we used data from the Three-City Study (TCS), a longitudinal project addressing the well-being of low-income female caregivers and their children in Boston, Chicago, and San Antonio (Angel et al., 2012). Using a stratified random sampling technique, the TCS recruited households with incomes less than 200% of the federal poverty threshold and with at least one child between the age of 0 and 4 years or 10 and 14 years (*N*= 2402). Initial data collection took place in 1999 and follow-up data collection occurred in 2000 to 2001, with a retention rate of 88% (see Angel et al., 2012). For the present study, we only included mothers who endorsed at least one lifetime experience of IPV at wave 1 (*N*=1159), as one of the goals of the study was to compare mothers who have experienced IPV in the past year with mothers who have experienced IPV over a year ago. We focused exclusively on biological mothers in order to maintain consistency across informants and only examined Latina and African American mothers because the rates of other racial/ethnic groups were too low for measurement invariance testing. We only examined data from biological mothers who had the focal child residing with them at waves 1 and 2. The subsample was almost evenly split between African American (*n*=

581; 50.1%) and Latino (*n*= 578; 49.9%) mothers. Half (51.5%) of the mothers (*n*=597) had male children and 48.5% had female children (*n*= 562). The mean age of the children was 6.65 years (SD= 5.16) and the mean age of mothers was 30.68 years (SD= 7.87). Slightly over half (53.3%) (*n*= 618) of the children included in the current study were in the younger cohort and 46.7% were in the older cohort (*n*=541). The mean age in the younger cohort was 2.01 years (SD=1.93) and the mean age in the older cohort was 11.97 years (SD=1.43). Our subsample did not differ from the main sample in terms of ethnicity, maternal age, child age, or child gender. As our goal was to include both age cohorts to increase sample size and to compare parenting at two distinct developmental periods, we were unable to use child reports on constructs because younger children were not asked to report on parenting. Thus, all measures are mother reported.

Study Protocol

Procedures for the protection of human subjects were followed and Institutional Review Board approval was received at each of the participating universities. Prior to the interviews, mothers were asked to sign standard informed consents regarding confidentiality and rights of participants. Mothers were told any abusive behaviors would be reported to Child Protective Services. Assent was also obtained from children in the older cohort. After receiving consent and assent, the same focal child and his or her caregiver from each of the eligible households completed cognitive assessments and in-person interviews at each wave using computer-assisted personal interview procedures. For potentially sensitive questions like those related to IPV and illegal activities, an automated computer-assisted survey interview (ACASI) was employed. Respondents were given the computer with a set of headphones and allowed to enter responses directly, a method that increases the validity of reporting on sensitive topics (Turner et al., 1998). Identical questions and measures were given during both waves of data collection.

Measures

Parenting. Mothers' parenting behaviors were measured using a subset of modified, self-reported items from the Raising Children Checklist, a 30-item scale developed to measure parenting styles among low-income samples (RCC; Shumow et al., 1998). From these items, previous studies using this sample have identified four factorially derived constructs: Firm-Responsiveness, Spanking, Disengagement, and Permissiveness (Angel et al., 2012). We chose to use items from the Firm-Responsiveness (3 items, $\alpha = .62$), Spanking (2 items, $r = .64$, $p < .01$), and Disengagement (2 items, $r = .34$, $p < .01$) subscales because the items for these subscales were the same across both age cohorts (whereas the Permissiveness scale had different items for younger and older children). Items from the Firm-Responsiveness subscale were, "I try to make rules which take my child's individual needs into consideration", "I try to show that I understand my child's feelings when I punish [him/her] for misbehaving", and "I try to explain the reasons for the rules I make." Items in the Spanking subscale were, "I think that a good spanking is sometimes needed to make my child understand" and "I spank my child when [he/she] has done something really wrong." The two items from the Disengagement subscale were "I avoid dealing with my child" and "I have so much on my mind, I don't have time to deal with my child". Each item was rated on a 4-point scale (1= definitely false, 2= sort of false, 3= sort of true, 4= definitely true). Scores were summed for each construct. Scores for the Firm-Responsiveness subscale ranged from 3- 12, and scores on the Spanking and Disengagement subscales ranged from 2- 8.

Intimate Partner Violence. Mothers' IPV experiences were assessed using a modified version of the Conflict Tactics Scales (CTS; Straus, 1979). Participants were asked 13 yes/no questions regarding psychological, physical, and sexual forms of IPV. Sample items include,

"Has a romantic partner ever threatened to take your children?" and "Has a romantic partner ever beaten you?". For each affirmative response, participants were asked how often the type of IPV had occurred *within the past year* on a 4-point scale (0= never, 1= once or twice, 2= several times, 3= often). Using this information, we created a binary categorical variable corresponding to whether the mother had experienced any IPV in the past year (0= no past year IPV, 1= past year IPV). In addition, we summed the scores of the past year follow-up question to index of the frequency of past year IPV exposure. Scores for past year IPV ranged from 0-42.

History of Childhood Abuse. The version of the CTS used for the study included 2 items (r= .43, p< .01) related to childhood abuse: "Before you turned 18, were you ever hit, beaten up, burned, assaulted with a weapon, or had your life been threatened by an adult in your family or household?" and "Before you turned 18, did anyone - a stranger, friend, acquaintance, date, or relative - ever try or succeed in doing something sexual to you or make you do something sexual to them against your wishes?" We used participant responses to these questions to create a binary categorical variable for childhood physical or sexual abuse history (0= No history of childhood abuse, 1= History of childhood abuse).

Parenting Stress. Parenting stress was assessed using a modified version of the Parenting Stress Index (PSI; Abidin, 1997). The Parenting Stress Index contains two subscales: Parenting Satisfaction and Parenting Stress. We chose to use the Parenting Stress subscale (7 items, α = .74), as it most closely aligns with our research questions. Sample items from the parenting stress subscale include: "Being a parent is harder than I thought" and "I feel overwhelmed by my responsibilities as a parent." Items for the PSI were rated on a 5-point

scale (1= strongly disagree, 2= disagree, 3= neither agree nor disagree, 4= agree, 5= strongly agree) and summed (range 7-35).

Covariates. Mothers completed a demographic questionnaire in which they reported their age, race/ethnicity, and gender and age of their children. Because the sample consisted of two distinct age cohorts, child age was coded as follows: 0 = younger cohort (0-4 years), 1= older cohort (10-14 years). In order to control for race and ethnicity in analyses and to examine measurement invariance of these socially constructed groups, maternal race/ethnicity was coded as follows: 0 = African- American, 1 = Latino.

Data Analysis Plan

We carried out all analyses in Mplus 8.2 (Muthén & Muthén, 2018). Before computing structural models, we ran a measurement model treating firm-responsiveness, spanking, disengagement, and parenting stress as latent constructs. We examined the measurement model to confirm that these items factored similarly to previous TCS papers within our newly created subsample. After running the initial full-group measurement model, we conducted tests of measurement invariance to establish that the same construct was being measured similarly across the African American and Latino subsamples, as well as across parents with older versus younger children.

Establishing measurement invariance requires assessing configural, metric, and scalar invariance. Configural invariance was tested by fitting the same set of indicators to latent constructs for each racial–ethnic and age group and examining general factor structure. Factorial invariance was tested by fixing all factor loadings to be equal across groups, and scalar invariance was tested by fixing item intercepts to be equal across groups (Temme, 2006). We used the weighted least squares with mean and variance adjustment estimator to

estimate the structural and measurement models according to the recommendations of Muthén et al. (1997) because it provides useful fit indices that are advantageous with categorical indicators. To evaluate the fit of the structural and measurement models, several fit indices were used, including the root mean square error of approximation (RMSEA; Browne & Cudeck, 1992), the Tucker–Lewis index (TLI; Tucker & Lewis, 1973), and the Comparative Fit Index (CFI; Bentler, 1990), all of which have been typically used as indices of practical fit. Consistent with the recommendations of Hu and Bentler (1999), RMSEA values of .05 or less and CFI/ TLI values of .90 or greater were used as indicators of adequate model fit. We did not include chi-squared values in our evaluation of fit, as chi-squared values are sensitive to sample size and may not be a useful metric in large samples (Hu & Bentler, 1999). We used full information maximum likelihood (FIML) to handle missing data. Rates of missing data were extremely low across all variables (<1%).

Main Effects Structural Models. We tested two structural models in which we estimated the direct associations of IPV frequency and past year IPV with parenting behaviors, as well as the indirect associations of IPV frequency and recency with parenting behaviors via parenting stress. For both models, we estimated paths both within and across time and regressed all latent constructs onto maternal ethnicity, child age, maternal age, and child gender as covariates.

Moderation by Childhood Abuse History. Finally, to test for moderation by childhood abuse history of mothers, we separated mothers into groups according to abuse history (0 = No childhood abuse history, n = 665; 1 = Childhood abuse history, n = 494) and tested a series of multi-group models in which we fixed and freed each path across groups and

compared the chi-squared values to test whether any main study pathway differed for those with or without a history of abuse.

Results

Table 1 presents descriptive statistics of demographic, parenting, IPV, and child abuse variables for all mothers who endorsed at least one instance of lifetime intimate partner violence at wave 1. For bivariate correlations among all study variables, see Table 5.

Measurement Model

Before running analyses to test our main hypotheses, we ran a full-group (*N*=1159) confirmatory factor analysis with all three parenting constructs and parenting stress treated as latent variables. Fit for this model was acceptable (TLI= .902, CFI= .922, RMSEA= .072), providing evidence that the constructs that we selected were appropriate for our subsample (for indicator factor loadings, see Table 6). Next, we ran tests of measurement invariance across age (children aged 0-4 years vs. children aged 10-14 years) and mother ethnicity (African- American vs. Latino) categories to determine whether to run models separately by group or treat age and ethnicity as covariates. First, we tested whether the overall factor structure observed from the full group model was the same across age and ethnicity groups (i.e., configural invariance). We then examined whether factor loadings were equivalent across groups (i.e., metric invariance) and whether item intercepts differed across groups (i.e., scalar invariance). We compared model fit indices of the configural, metric, and scalar models to determine which model fit the data best. For the age invariance testing, we found that the metric model fit the data best (CFI= .927, TLI= .913, RMSEA= .065). For the tests comparing African American parents with Latino parents, the metric model was also the best fit (CFI= .925, TLI= .911, RMSEA= .065). As we were able to demonstrate metric invariance across age and ethnicity, we decided to treat child age and

maternal ethnicity as covariates rather than conduct multigroup analyses of our main models (van de Schoot et al., 2012). For all measurement invariance model fit statistics, see Table 7.

Structural Models

Figure 3 shows the model fit indices, standardized estimates, and standard errors for structural models examining the direct and indirect effects of IPV frequency and recency on parenting and parenting stress within and across time while controlling for the effects of child age, child gender, and maternal ethnicity. Both models had acceptable fit (IPV Frequency model fit: TLI= .895, CFI= .914, and RMSEA =.044; Presence of Past Year IPV model fit: TLI= .893, CFI= .913, and RMSEA =.042). Tables 2 and 3 present total and specific indirect effects for the IPV frequency and Presence of Past Year IPV models, respectively.

Among Mothers Exposed to IPV, Does the Frequency of Past Year IPV Predict Differences in Parenting Directly and via Increased Parenting Stress? As expected, IPV frequency in the past year predicted higher parenting stress concurrently at wave 1 (β= .19, p<.001) and also at wave 2 (β= .14, p<.001). Within each wave, parenting stress predicted less firm and responsive parenting (wave 1: β= -.11, p= .009; wave 2:β=-.19, p< .001), more spanking (wave 1: β= .17, p< .001; wave 2: β= .30, p< .001), and higher levels of disengaged parenting (wave 1: β= .35, p< .001; wave 2:β= .33, p< .001). All potential indirect effects are reported in Table 2. Within waves 1 and 2, IPV frequency indirectly predicted less firm-responsiveness (wave 1: β= -.02, p= .018; wave 2: β= -.03, p= .009), greater spanking (wave 1: β= .03, p< .001; wave 2: β= .04 p= .001), and greater disengaged parenting (wave 1: β= .07, p< .001; wave 2: β= .05 p= .002) via greater parenting stress. Although an unexpected direct path between parenting stress at wave 1 and less spanking at wave 2 was also present in this model (β= -.18, p< .001), the total indirect effect indicated that IPV frequency at wave 2 predicted an

increase in spanking at wave 2 through all available pathways (β = .06, p= .022). IPV frequency at wave 1 also had a positive indirect effect on parents' disengagement (β= .09, p= .017).

Among Mothers Exposed to IPV, Does a History of Recent IPV Predict Differences in Parenting Directly and Indirectly via Increased Parenting Stress? Compared to mothers with less recent IPV history, mothers with past year IPV experience reported greater parenting stress (β= .15, $p< .001$) and spanking (β= .07, p= .042) within wave 1 (Figure 3). Concurrently at each wave, greater parenting stress predicted less firm-responsiveness (wave 1: β= -.10, p= .021; wave 2: β= -.18, p= .001), more spanking (wave 1: β= .17, $p< .001$; wave 2:β= .28, $p< .001$), and higher levels of disengagement (wave 1: β= .35, $p< .001$; wave 2: β= .32, $p< .001$). We also calculated all potential indirect effects (see Table 3). At wave 1, we found indirect concurrent pathways in which mothers' past year IPV exposure predicted lower levels of firm-responsiveness (β= -.01, p= .038), more spanking (β= .02, p= .002), and more disengagement (β= .05, $p< .001$) mediated through parenting stress. These indirect pathways were all in the expected direction. Greater parenting stress at wave 1 was linked directly with less spanking at wave 2 (β= -.18, $p< .001$) and the total indirect effect revealed that past year IPV resulted in an increase in spanking at wave 2 (β= .10, p= .002). Past year IPV at wave 1 also had a total negative indirect effect on firm responsiveness (β= -.08, p= .003) and a positive indirect effect on parents' disengagement (β= .13, p= .002).

Among Mothers Exposed to IPV, Are the Associations among IPV, Parenting Stress, and Parenting Greater for Mothers with a History of Childhood Abuse? To test for the moderating effects of childhood abuse history on associations among IPV, parenting stress, and parenting, we ran multi-group models contrasting IPV-exposed mothers who reported a history of childhood abuse (n= 494) with IPV-exposed mothers who did not (n= 665). Paths were

estimated freely, then fixed to be equal across groups, and fit indices between models were compared to examine which model fit better (i.e., whether moderation fit the data better than a model without moderation). Table 4 shows the fit indices for all multi-group models.

IPV Frequency. We found that the model fit worsened when fixing all parameters to be equal across groups, providing evidence of moderation (freed parameter model fit: TLI= .909, CFI= .919, RMSEA= .040, χ^2= 1870.24; Fixed parameter model fit: TLI= .889, CFI= .898, RMSEA= .044, χ^2= 2152.51). To examine which specific paths were moderated by maternal abuse history, we then compared model chi-square values between the freely estimated model and a model in which one particular path was fixed to be equal across groups. If model fit significantly worsened by imposing the cross-group equality constraint, we interpreted this as evidence of moderation by childhood abuse history. In contrast to our hypotheses, abuse history did not moderate associations between the frequency of IPV and parenting stress, nor between parenting stress and parenting in mothers with IPV histories. However, maternal history of abuse moderated the path from IPV Frequency at Wave 1 to IPV Frequency at Wave 2 ($\chi^2(1) = 4.59$, p = .04), as well as the path from parenting stress at Wave 1 to parenting stress at Wave 2 ($\chi^2(1) = 5.42$, $p = .02$). In both cases, the stability of these constructs was higher across waves for mothers with a childhood abuse history, meaning that mothers with a history of child abuse were more likely to experience IPV at both waves and had more persistent parenting stress across time. For all path estimates, see Figure 4.

Presence of Past Year IPV. We found that the model in which all paths were fixed to be equal between groups (i.e., between mothers with a history of childhood abuse and mothers without a history of abuse) fit the data better than the model in which all paths between groups were freely estimated (Freed parameter model fit: TLI= .912, CFI= .922, RMSEA= .038, χ^2=

1778.32; Fixed parameter model fit: TLI= .927, CFI= .933, RMSEA= .031, χ^2= 1592.85). Thus, we did not find evidence that maternal abuse history moderated associations between recent IPV, parenting stress, and parenting in mothers who have experienced IPV (see Figure 5).

Discussion

The present study examined associations among IPV, parenting stress, and parenting in a two-wave community sample of 1159 low-income African- American and Latino mothers with histories of IPV exposure. We found that both the frequency and recency of IPV exposure were associated with more negative and less positive parenting practices through increased parenting stress. However, a history of abuse did not appear to sensitize women to these effects, though it did appear to predict more stability in exposure to IPV and parenting stress. These results provide evidence that parenting stress is an important mechanism linking IPV to parenting outcomes. Further, these findings are strengthened through the use of a large longitudinal dataset of African- American and Latino mothers from the community, with invariance testing to confirm that that results generalize across both identity groups and developmental period for parenting. These findings suggest that parenting stress may be a key target for supportive parenting interventions among mothers exposed to IPV.

We found that mothers differed in their parenting stress and parenting practices according to the timing of IPV exposure. Compared to mothers with less recent IPV exposure, mothers who reported having experienced IPV in the past year reported that they experienced higher levels of parenting stress, were more disengaged and unresponsive towards their children, and endorsed greater use of physical punishment. These results are in line with the spillover hypothesis (Engfer, 1998), which proposes that more proximal experiences of IPV are more impactful to the mother and child. These findings also provide evidence that parent psychological resources are

important in predicting parent behaviors in the context of stress, consistent with Belsky's (1984) model of parenting processes. These results are also consistent with empirical findings from Barrett (2010) and Kelleher and colleagues (2008), who found that past year, but not lifetime, exposure to IPV was associated with higher endorsement of physical punishment. In contrast to Barrett's finding that recent IPV exposure was not associated with differences in positive parenting, our study found that past year IPV exposure was associated with less firm and responsive parenting. Unlike both Barrett and Kelleher, who contrasted mothers with histories of IPV to mothers without any IPV exposure, we directly examined differences between mothers with past year IPV exposure and mothers who had experienced IPV over a year ago. Thus, we provide evidence that among survivors of IPV, those with more recent IPV exposure are more likely to feel stressed and overwhelmed by parenting, which may in turn influence their capacity to parent effectively. It should be noted that these effects were all modest in size.

In contrast to our hypotheses, maternal abuse history did not moderate associations between IPV, parenting stress, and parenting. This finding suggests that a mother's history of abuse might not make her more sensitive to IPV in terms of parenting stress and parenting. This result was surprising given that past studies have shown that mothers with history of abuse are more sensitive to stress and that childhood abuse history contributes to poorer parenting outcomes (Alexander et al., 2000, Moehler et al., 2007, Pereira et al., 2012). Moreover, these findings are inconsistent with Belsky's (1984) assertion that parental developmental history plays a role in predicting parenting traits. However, our measure of childhood abuse was categorical, and thus may have missed much context around maternal histories of childhood abuse. We are thus cautious in our interpretation of this finding.

Though the present study contributes to the literature on IPV and parenting, there are several limitations to highlight. First, the study was limited to mothers who reported any history of IPV and thus does not broadly generalize to all mothers, nor do associations reflect variance from mothers (e.g., their parenting stress, their parenting) with no history of IPV. Though this approach is also a strength of the study, it makes comparing the results to studies that contrasted mothers with IPV to those with no IPV history difficult. Second, for mothers who endorsed IPV exposure occurring over a year ago, there was no information available for the specific timing of past IPV exposure, making it likely that there was considerable unmeasured variation in the timing of IPV exposure. Third, the measure used to assess IPV only contained a single item about sexual violence and thus our findings are limited for this form of IPV. Fourth, the physical abuse item used in this study was not ideal, as it covers a wide range of behaviors ranging from being spanked to being seriously physically assaulted. Fifth, we combined the physical and sexual abuse items, though it is important to point out that these are two distinct experiences, each with their own possible associated outcomes. Sixth, we relied exclusively on maternal self-report of IPV, parenting, and parenting stress, which may inflate associations between variables via shared method variance. Seventh, it is important to note that the data used for this study is almost two decades old, and thus findings reflected in this study may not reflect current associations between IPV, parenting stress, and parenting. Lastly, though we focused on measurement invariance testing to examine support for the generalizability between experiences of mothers identifying as Latino versus African- American, we did not directly compare these two groups, as the invariance testing supported testing associations across groups. Cross-cultural comparisons are a potentially important question for future studies.

This study has several strengths, including a large sample size, use of longitudinal data, and inclusion of a large Latino and African- American sample. To our knowledge, this is the first study of IPV and parenting to confirm measurement invariance, which allowed us to establish the validity of findings cross-culturally and across developmental periods. Moreover, by using a well-sampled at-risk community sample, we were able to examine these questions among a broad range of survivors, not only among those who went to a shelter or were involved in justice/legal systems. These results add to the literature by examining differences in parenting according to the timing of IPV exposure and the role parenting stress plays in this process.

These results highlight that interventions for mothers exposed to IPV with children in the home should include strategies aimed at reducing parenting stress. Clinicians working with mothers who are survivors of IPV may incorporate measures of parenting stress into their initial evaluations and consider the role parenting stress plays in parenting behaviors. Moreover, psychological interventions targeting parenting-related cognitions that may contribute to stress in IPV survivors- such as self-blame and perceived lack of self-efficacy- may be particularly promising for this group. In terms of policy, these findings imply that increased access to resources for reducing childcare burden and parenting stress- including health care, affordable childcare, and stable housing- may improve outcomes for families exposed to violence, particularly families of color living in poverty. Finally, our study highlights that many mothers with a history of abuse show resilience in terms of maintaining a positive parenting environment, a process that should be highlighted as we consider the translational implications of this work.

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Table 1: *Descriptive Statistics of Demographic, Parenting, Intimate Partner Violence, and Child Abuse Variables*

	Total (*N*=1159)	Younger (*n*=618)	Older (*n*=541)
African- American (Mother), %	50.1	51.5	48.8
Latino (Mother), %	49.9	48.5	51.2
Mean Mother Age (SD)	30.68(7.87)	25.71(5.64)	36.43(5.98)
Mean Child Age (SD)	6.65(5.16)	2.01(1.93)	11.97(1.43)
Male (Child), %	51.5	53.7	48.8
Female (Child), %	48.5	46.3	51.2
Mean Firm-Responsive Parenting Wave 1 (SD)	10.68(1.77)	10.35(2.04)	11.04(1.32)
Mean Firm-Responsive Parenting Wave 2 (SD)	10.83(1.50)	10.68(1.59)	10.98(1.38)
Mean Spanking Wave 1 (SD)	5.00(2.18)	5.18(2.12)	4.82(2.24)
Mean Spanking Wave 2 (SD)	5.24(2.14)	5.76(1.92)	4.66(2.24)
Mean Parental Disengagement Wave 1 (SD)	2.48(1.02)	2.36(.90)	2.64(1.14)
Mean Parental Disengagement Wave 2 (SD)	2.46(.98)	2.36(.82)	2.56(1.10)
Mean Parenting Stress Wave 1 (SD)	20.30(5.88)	20.23(5.67)	20.30(6.09)
Mean Parenting Stress Wave 2 (SD)	20.16(5.88)	20.30(5.81)	19.95(6.02)
Mean Past Year IPV Frequency Wave 1 (SD)	6.30(7.84)	7.28(7.84)	5.04(7.70)
Mean Past Year IPV Frequency Wave 2 (SD)	6.16(7.84)	7.00(7.84)	5.18(7.84)
Experienced IPV in the Past Year Wave 1, %	50.0	57.5	41.2
Experienced IPV in the Past Year Wave 2, %	61.6	63.9	57.7
History of Childhood Abuse, %	42.6	43.7	41.2

Note. IPV= Intimate Partner Violence.

Table 2: Total and Specific Indirect Effects of IPV Frequency on Parenting

Path	β	SE
IPV Frequency Wave 1 → Firm- Responsive Parenting Wave 1		
via Parenting Stress Wave 1	-.02*	.01
IPV Frequency Wave 1 → Spanking Wave 1		
via Parenting Stress Wave 1	.03**	.01
IPV Frequency Wave 1 →Parental Disengagement Wave 1		
via Parenting Stress Wave 1	.07**	.02
IPV Frequency Wave 1 → Firm- Responsive Parenting Wave 2		
via IPV Frequency Wave 2	.00	.02
via Firm-Responsive Parenting Wave 1	.00	.02
via Parenting Stress Wave 1	.00	.01
via Parenting Stress Wave 2	-.01	.01
via Parenting Stress Wave 1 → Firm-Responsive Parenting Wave 1	-.01*	.00
via IPV Frequency Wave 2 → Parenting Stress Wave 2	-.01*	.00
via Parenting Stress Wave 1 →Parenting Stress Wave 2	-.02 **	.00
TOTAL INDIRECT EFFECT	-.05	.03
IPV Frequency Wave 1 → Spanking Wave 2		
via IPV Frequency Wave 2	.01	.01
via Spanking Wave 1	.02	.02
via Parenting Stress Wave 1	-.03**	.01
via Parenting Stress Wave 2	.01	.01
via Parenting Stress Wave 1 → Spanking Wave 1	.02**	.01
via IPV Frequency Wave 2 → Parenting Stress Wave 2	.02**	.01
via Parenting Stress Wave 1 → Parenting Stress Wave 2	.03**	.01
TOTAL INDIRECT EFFECT	.06*	.03
IPV Frequency Wave 1 → Parental Disengagement Wave 2		
via IPV Frequency Wave 2	-.02	.02
via Parental Disengagement Wave 1	.02	.03
via Parenting Stress Wave 1	-.01	.02
via Parenting Stress Wave 2	.01	.01
via Parenting Stress Wave 1 → Parental Disengagement Wave 1	.04**	.01
via IPV Frequency Wave 2 → Parenting Stress Wave 2	.02**	.01
via Parenting Stress Wave 1 →Parenting Stress Wave 2	.03**	.01
TOTAL INDIRECT EFFECT	.09*	.04
IPV Frequency Wave 2 → Firm- Responsive Parenting Wave 2		
via Parenting Stress Wave 2	-.03**	.01
IPV Frequency Wave 2 → Spanking Wave 2		
via Parenting Stress Wave 2	.04**	.01
IPV Frequency Wave 2 →Parental Disengagement Wave 2		
via Parenting Stress Wave 2	.05**	.02

Note. N = 1159. Standardized β scores are reported.

* $p < .05$, ** $p < .01$.

Table 3: Total and Specific Indirect Effects of the Presence of Past Year IPV on Parenting

Path	β	SE
Presence of Past Year IPV Wave 1 → Firm- Responsive Parenting Wave 1		
via Parenting Stress Wave 1	-.01*	.01
Presence of Past Year IPV Wave 1 → Spanking Wave 1		
via Parenting Stress Wave 1	.02*	.01
Presence of Past Year IPV Wave 1 → Parental Disengagement Wave 1		
via Parenting Stress Wave 1	.05*	.01
Presence of Past Year IPV Wave 1 → Firm- Responsive Parenting Wave 2		
via Presence of Past Year IPV Wave 2	.00	.01
via Firm-Responsive Parenting Wave 1	-.03	.02
via Parenting Stress Wave 1	.00	.01
via Parenting Stress Wave 2	-.01	.01
via Parenting Stress Wave 1 → Firm-Responsive Parenting Wave 1	-.01*	.00
via Presence of Past Year IPV Wave 2 → Parenting Stress Wave 2	-.01	.01
via Parenting Stress Wave 1 →Parenting Stress Wave 2	-.01	.01
TOTAL INDIRECT EFFECT	-.08**	.03
Presence of Past Year IPV Wave 1 → Spanking Wave 2		
via Presence of Past Year IPV Wave 2	.02	.03
via Spanking Wave 1	.04*	.02
via Parenting Stress Wave 1	-.03**	.01
via Parenting Stress Wave 2	.02	.01
via Parenting Stress Wave 1 → Spanking Wave 1	.01**	.00
via Presence of Past Year IPV Wave 2 → Parenting Stress Wave 2	.01	.01
via Parenting Stress Wave 1 → Parenting Stress Wave 2	.02	.01
TOTAL INDIRECT EFFECT	.10**	.03
Presence of Past Year IPV Wave 1 → Parental Disengagement Wave 2		
via Presence of Past Year IPV Wave 2	.02	.03
via Parental Disengagement Wave 1	.03	.03
via Parenting Stress Wave 1	-.01	.01
via Parenting Stress Wave 2	.03	.02
via Parenting Stress Wave 1 → Parental Disengagement Wave 1	.03**	.01
via Presence of Past Year IPV Wave 2 → Parenting Stress Wave 2	.01	.01
via Parenting Stress Wave 1 →Parenting Stress Wave 2	.03**	.01
TOTAL INDIRECT EFFECT	.13**	.04
Presence of Past Year IPV Wave 2 → Firm- Responsive Parenting Wave 2		
via Parenting Stress Wave 2	-.02	.01
Presence of Past Year IPV Wave 2 → Spanking Wave 2		
via Parenting Stress Wave 2	.03	.02
Presence of Past Year IPV Wave 2 → Parental Disengagement Wave 2		
via Parenting Stress Wave 2	.03	.02

,*Note.* $N = 1159$. Standardized β scores are reported.
*$p < .05$, **$p < .01$.

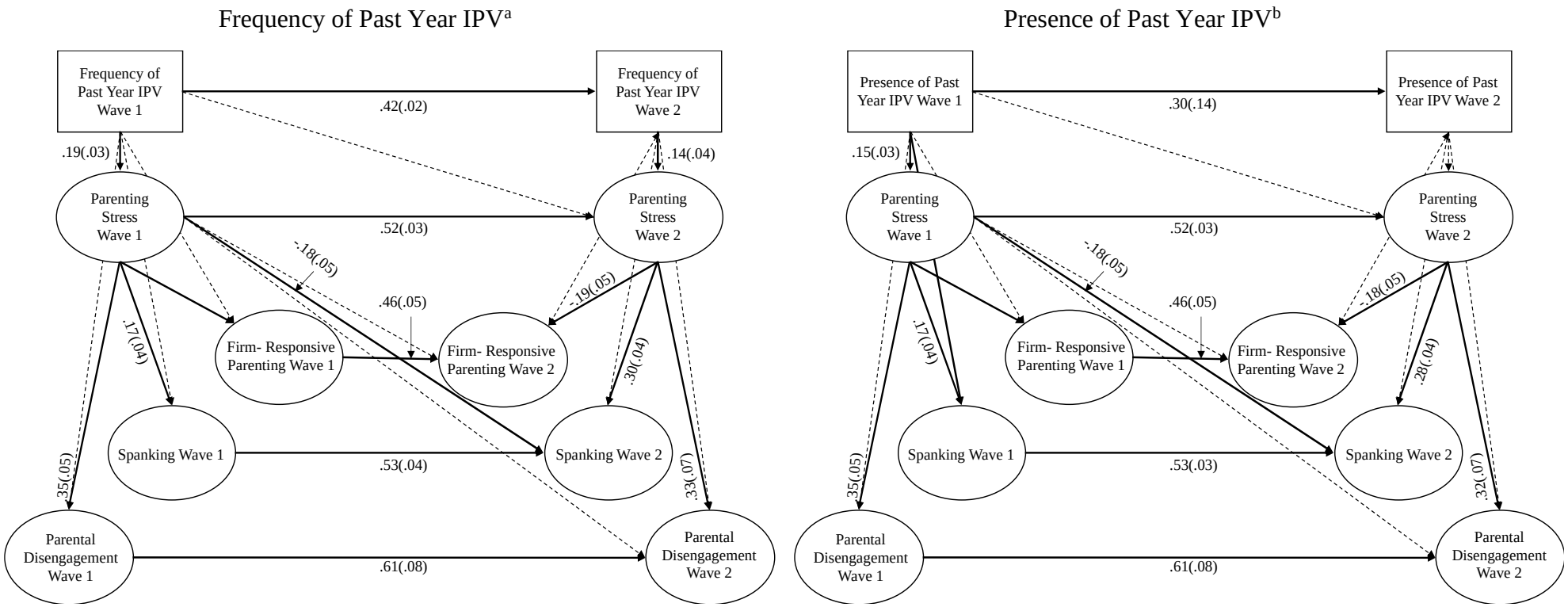
Table 4: Fit Indices for Childhood Abuse Multi-Group Models

Model	TLI	CFI	RMSEA	χ^2
Presence of Past Year IPV				
Freed Parameter Model [a]	.912	.922	.038	1778.32
Fixed Parameter Model [b]	.927	.933	.031	1592.85
Frequency of Past Year IPV				
Freed Parameter Model [a]	.909	.919	.040	1870.24
Fixed Parameter Model [b]	.889	.898	.044	2152.51

Note. History of childhood abuse group *n*= 665, No history of childhood abuse group *n*= 494

[a] Model in which all parameters were freely estimated across childhood abuse groups, [b] Model in which all parameters were constrained to be equal across childhood abuse groups

Figure 3:Results of Structural Equation Models Testing Effects of IPV on Parenting Stress and Parenting



Note. Standardized β scores are reported (*N*= 1159). Standard errors are shown in parentheses. Solid lines indicate significant paths ($p \leq .05$). All latent constructs regressed on maternal ethnicity, maternal age, child age, and child gender covariates; paths from covariates not depicted for clarity.

[a]IPV Frequency is a continuous variable that reflects the number of unique types of IPV to which mothers were exposed in the past year, adjusted for the frequency with which each type of exposure occurred. Practical fit indices of the model were as follows: TLI= .895, CFI= .914, and RMSEA =.044.

[b]Presence of Past Year IPV is a binary categorical variable where 0 = IPV exposure over a year ago and 1 = IPV exposure in the past year. Practical fit indices of the model were as follows: TLI= .893, CFI= .913, and RMSEA =.042.

Table 5: Correlations among latent and observed variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Presence of Past Year IPV Wave 1[a]	-											
2. Presence of Past Year IPV Wave 2[a]	**.31****	-										
3. IPV Severity Wave 1[a]	**.61****	**.26****	-									
4. IPV Severity Wave 2[a]	**.29****	**.63****	**.43****	-								
5. Firm-Responsive Parenting Wave 1[b]	**-.14****	**-.09***	-.06	-.03	-							
6. Firm-Responsive Parenting Wave 2[b]	**-.12****	-.06	-.03	-.03	**.15****	-						
7. Spanking Wave 1[b]	**.11****	.05	.05	.03	**-.31****	**.12***	-					
8. Spanking Wave 2[b]	**.16****	**.16****	.06	**.10****	-.08	**.16****	**.35****	-				
9. Parental Disengagement Wave 1[b]	.04	.05	.07	.02	**.56****	.04	**-.21****	**-.12****	-			
10. Parental Disengagement Wave 2[b]	.00	**.11****	.07	.02	-.08	**.61****	-.09	.07	.05	-		
11. Parenting Stress Wave 1[b]	**.15****	**.11****	**.19****	**.11****	**-.19****	-.01	**.60****	**.32****	**-.47****	.10	-	
12. Parenting Stress Wave 2[b]	**.19****	**.16****	**.17****	**.16****	-.06	**.16****	**.14****	**.62****	**-.22****	**.27****	**.37****	-

Note. $N = 1159$
[a]Observed Variable, [b]Latent Variable
$^{*}p < .05$, $^{**}p < .01$.

Table 6: Factor Loadings from Confirmatory Factor Analysis of Parenting and Parenting Stress Constructs

Factor		Factor loading
Firm- Responsive Parenting		
RCC4.	Make rules which take child's individual needs into consideration	.64
RCC17.	Shows understanding of child's feelings when punishing [him/her]	.72
RCC20.	[Parent] tries to explain the reasons for the rules [parent] makes	.72
Spanking		
RCC10.	Thinks good spanking needed to make child understand	.95
RCC21.	Spanks child when [he/she] has done something really wrong	.76
Disengaged Parenting		
RCC27.	Avoids dealing with child	.71
RCC29.	Has so much on mind, doesn't have time to deal with child	.81
Parenting Stress		
PSI2.	Sometimes child really bothers [parent]	.57
PSI3.	Parenting is such a big job, it cuts [parent] off from other people.	.60
PSI5.	Doesn't have as much patience with child as [parent] should	.58
PSI6.	Being a parent is harder than [parent] thought it would be	.57
PSI7.	Puts so much into parenting, [parent] doesn't have time for self	.63
PSI8.	Feels overwhelmed by responsibilities as a parent	.63
PSI9.	Often feels angry with child	.61

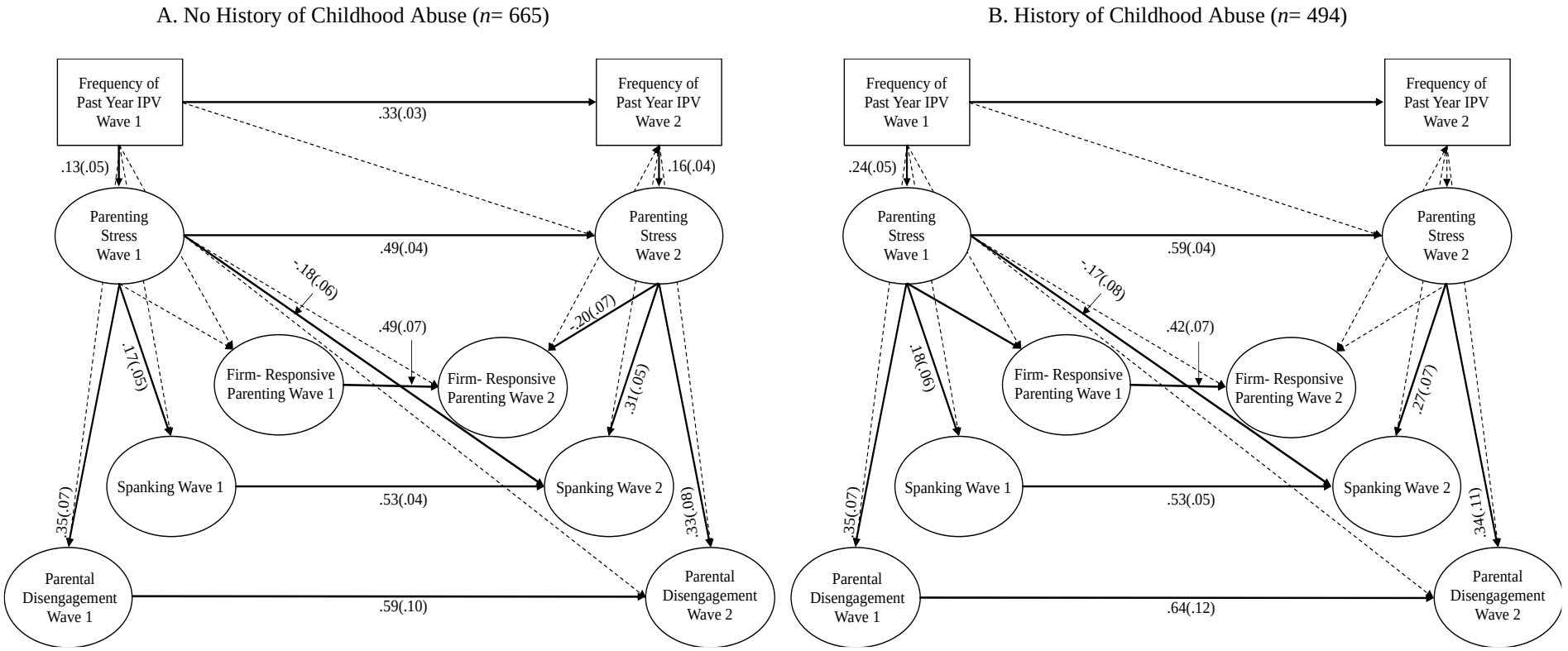
Note. N= 1159
RCC= Raising Children Checklist, PSI= Parenting Stress Index
$p<.001$ in all factor loadings (two-tailed significance)

Table 7: Measurement invariance of parenting constructs and parenting stress across ethnicity and child age groups

	χ^2	*df*	CFI	TLI	RMSEA
Child Age (Younger Cohort vs. Older Cohort)					
Configural	514.19	142	.926	.903	.067
Metric	519.03	152	.927	.913	.065
Scalar	584.87	183	.920	.921	.062
Maternal Ethnicity (African- American vs. Latino)					
Configural	498.14	142	.929	.909	.066
Metric	527.85	152	.925	.911	.065
Scalar	733.78	183	.891	.891	.072

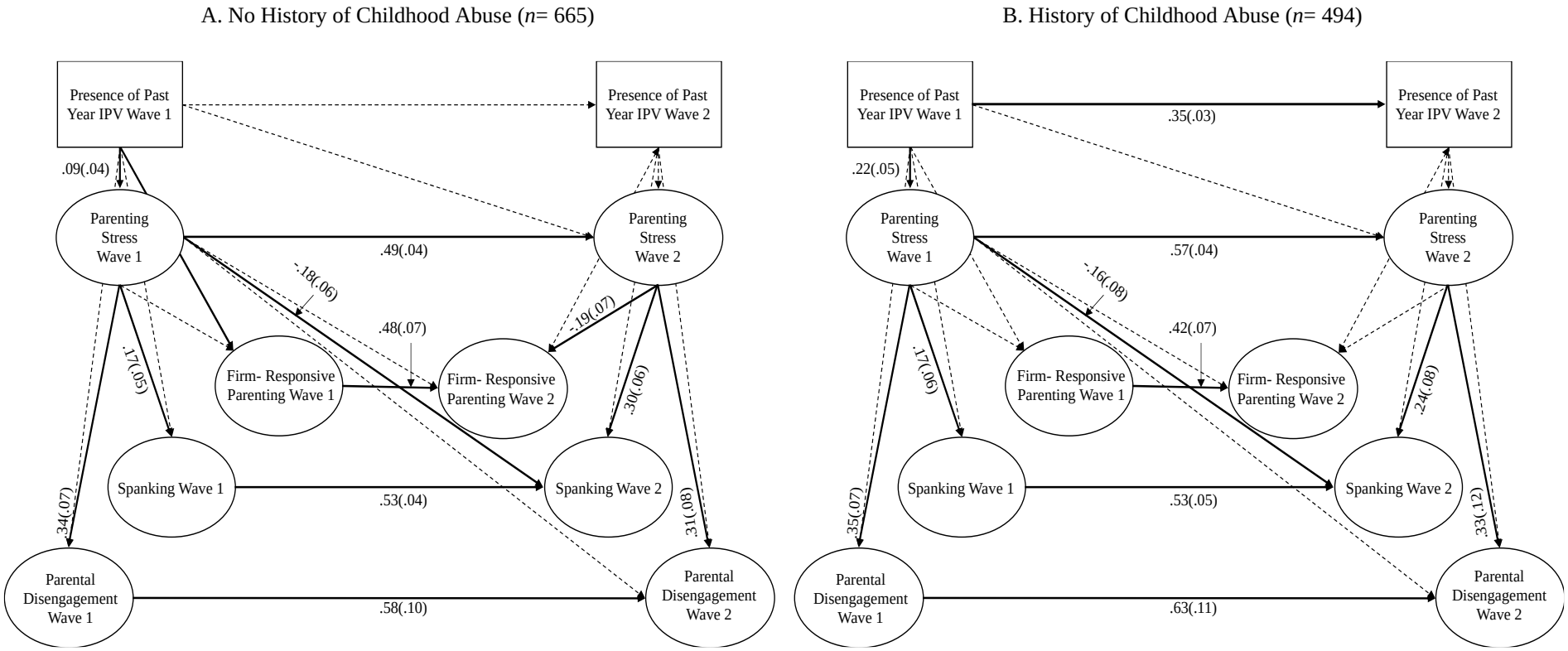
Note. df = degrees of freedom; CFI = comparative fit index; TLI= Tucker-Lewis index; RMSEA= root mean square of approximation

Figure 4: Results of Multigroup Structural Equation Model testing effects of IPV frequency on parenting/ parenting stress



Note. Practical fit indices of the model were as follows: TLI= .912, CFI= .922, and RMSEA =.038. Standardized β scores are reported (*N*= 1159). Standard errors are shown in parentheses. Solid lines indicate significant paths ($p \leq .05$). All latent constructs regressed on maternal ethnicity, maternal age, child age, and child gender covariates; covariates not depicted for clarity. Presence of Past Year IPV is a binary categorical variable where 0 = IPV exposure over a year ago and 1 = IPV exposure in the past year.

Figure 5: Results of Multigroup Structural Equation Model testing effects of the presence of past year IPV on parenting/ parenting stress



Note. Practical fit indices of the model were as follows: TLI= .912, CFI= .922, and RMSEA =.038. Standardized β scores are reported (*N*= 1159). Standard errors are shown in parentheses. Solid lines indicate significant paths ($p \leq .05$). All latent constructs regressed on maternal ethnicity, maternal age, child age, and child gender covariates; covariates not depicted for clarity. Presence of Past Year IPV is a binary categorical variable where 0 = IPV exposure over a year ago and 1 = IPV exposure in the past year.

Chapter 3: Material Hardship and Parenting: Examining the Moderating Effects of Social Support

Introduction

The harmful effects of poverty for families and children have been demonstrated for decades. Reviews of empirical findings provide evidence that socioeconomic disadvantage has a deleterious influence on the cognitive, behavioral, emotional, and physical development of children and adolescents (Brooks- Gunn & Duncan, 1997; Chaudry & Wimer, 2016; Roelen & Gassmann, 2008). Given the high rate of childhood poverty in the U.S (National Center for Children in Poverty, 2018), poverty is a pervasive and troubling public health issue. In order to develop interventions and policies to assist families living in poverty, it is important to understand the specific mechanisms through which poverty affects child outcomes.

There is evidence that the negative impact of economic disadvantage on children and adolescents significantly derives from economic influences on the emotions and behaviors of parents or other caregivers (K. J. Conger et al., 2000; McLoyd, 1998). The Family Stress model (Conger and Donnellan 2007; Conger et al. 1992, 1994) provides a useful framework for understanding the mechanisms through which the stress of poverty impacts parents and undermines parental functioning. The model proposes that adverse economic conditions such as low family income and acute negative financial events affect the degree to which families experience material hardships, such as being unable to purchase necessary goods and services, having to make significant cutbacks in daily expenditures because of limited resources, and

being unable to pay monthly bills (Conger, Rueter, & Conger, 2000; Conger, Rueter, & Elder, 1999).

Parents experiencing material hardship are subject to stress as a result of being unable to make ends meet and of being more likely to experience negative life events (Edin & Lein, 1997; McLeod & Kessler, 1990; McLoyd, 1990; McLoyd, Jayaratne, Ceballo, & Borquez, 1994). The stress inherent in living with low income may become manifest as marital conflict and/or depression (Conger, Ge, Elder, Lorenz, & Simons, 1994; Du Rocher Schudlich & Cummings, 2003; Kessler et al., 2003; Parke et al., 2004; Wadsworth, Raviv, Compas, & Connor-Smith, 2005). Children whose parents' marriages are characterized by high conflict or whose parents have elevated levels of depressive symptoms are at a greater risk for social, emotional, and behavioral problems (Cummings & Davies, 1999; Davies & Cummings, 1994; Downey & Coyne, 1990), in large part because maritally distressed or depressed parents are more likely to either withdraw from their children or to become hostile toward them (Dix, Gershoff, Meunier, & Miller, 2004; McLoyd et al., 1994; NICHD Early Child Care Research Network, 1999; Pinderhughes, Dodge, Bates, Pettit, & Zelli, 2000; Simons, Lorenz, Wu, & Conger, 1993; Tronick & Weinberg, 1997). A 2017 review demonstrated empirical support for all proposed paths within the Family Stress model (Masarik & Conger, 2017).

One of the features of the Family Stress model is that it positions material hardship as a more proximal indicator of family economic circumstance and predictor of parenting than income alone. This is not surprising, since family income and federal poverty cutoffs do not consider variations in cost of living across geographical regions, meaning two families at the same income level may have different purchasing power depending on where they live (Glaeser, 2011). Consistent with the Family Stress Model, there is evidence that material hardship, over

and above income, predicts parenting behaviors (McConnell, Breitkreuz, & Savage, 2010, Slack et al., 2011). For example, Gershoff, Aber, Raver, and Lennon (2007) showed that material hardship more strongly predicted harsh or unresponsive parenting than income alone in a sample of over 20,000 families of kindergarteners. Though the association between hardship and parenting is relatively well-established, most of these studies have been in pre-school children, with less known about these processes when children reach adolescence. As adolescence presents new parenting challenges to navigate and is a critical period when risky behaviors emerge (Steinberg & Silk, 2002), there is a need for more work looking at the links between material hardship and parenting in this population. It is worth noting that mounting evidence suggests that adolescence also represents a "critical period" for parenting and child outcomes (Dishion, Nelson, & Bullock, 2004; Eccles, Templeton, Barber, & Stone, 2003) and there is high value in continued research in this area.

According to the Family Stress Model, material hardship is likely to undermine parenting only to the extent that it stresses the parent. Thus, the presence of stress-buffering resources such as social support might attenuate links between material hardship and parenting. Social support is defined as the perception or experience that one is loved and cared for by others, esteemed and valued, and part of a social network of mutual assistance and obligations (Wills, 1991). In a 1985 paper, Cohen, Mermelstein, Kamarck, and Hoberman (1985) identified three distinct forms of social support: tangible support, which comprises instrumental aid; appraisal, which refers to the availability of people with whom to discuss life's problems; and belonging, or the availability of people with whom one can do things. Research consistently demonstrates that broadly, social support reduces symptoms of depression and anxiety during times of stress (e.g., Fleming, Baum, Gisriel, & Gatchel, 1982; Lin, Ye, & Ensel, 1999; Sarason, Sarason, & Gurung, 1997). Social

support has also been found to promote psychological adjustment to chronic health issues (Holahan, Moos, Holahan, & Brennan, 1997; Turner-Cobb et al., 2002; Penninx et al., 1998; Stone, Mezzacappa, Donatone, & Gonder, 1999; Goodenow, Reisine, & Grady, 1990; Dimond, 1979; Magni, Silvestro, Tamiello, Zanesco, & Carl, 1988). As the definition makes clear, social support can also simply involve the perception that such resources are available, should they be needed. Research suggests that the mere perception of social support, whether it is utilized, can be stress-reducing with concomitant benefits for well-being (Smith, Ruiz, & Uchino, 2004). In fact, beliefs about the availability of emotional support appear to exert stronger effects on mental health than the actual receipt of social support does (e.g., Wethington & Kessler, 1986; Dunkel-Schetter & Bennet, 1990; see Thoits, 1995 for discussion).

Given the wealth of evidence of social support's benefits for health and well-being broadly, it is unsurprising that there is evidence that social support is associated with parenting that is warmer and less harsh (Burchinal, Follmer & Bryant, 1996; Chang, 2017; Thompson, 1995). There is additional evidence that social support is associated with better parenting outcomes in low-income contexts specifically. Radey's (2018) review investigating the effects of social support for low-income mothers found that with few exceptions (Jung, Fuller, & Galindo, 2012; Raikes, & Thompson, 2005), social support was related to more positive parenting behaviors and fewer negative parenting behaviors. However, most of the studies included in the review addressed social support as a main effect predictor of parenting in a low-income sample, highlighting the need for more work addressing how social support may support low-income parents' ability to parent effectively in the context of specific poverty-related adversities, such as material hardship.

In addition, Radey (2018) found that operationalization of social support differed both within and across datasets depending on study focus and available items in each study wave. Specifically, many studies included in the review measured instrumental support only or a combination of instrumental and emotional support; the remainder did not specify support type (e.g., general availability of support from intimate relationships, friends, and neighborhood), or examined emotional support only. Effective social support may depend on an appropriate balance between the needs of the recipient and what that recipient gets from those in their social network (Cohen & McKay, 1984; Cohen & Wills, 1985). Increased understanding of informal support and its nuances can inform intervention design and delivery to strengthen vulnerable mothers' informal support perceptions, thereby improving individual and family outcomes.

The Current Study

The goal of the present study is to test whether social support moderates the association between material hardship and parenting in a sample of 237 low-income families of adolescents. We use material hardship as our main predictor of parenting as opposed to household income or income-to-needs as prior work suggests that material hardship is a more proximal measure of family circumstance. The study incorporates child report and behavioral observation of parenting, which contribute to the literature in two ways. One, research shows that an adolescent's (versus parent's) perception of the parenting relationship may be a stronger predictor of outcomes (Khaleque 2013, Yoshizawa et al. 2017). Secondly, observations can help to highlight those dynamics that the parent and/or child may not report, as well as dynamics that are difficult to capture in self-report measures, such as nonverbal behaviors, tone, and withdrawal (Gardner, 2000). Thirdly, the study benefits from the use of a sample that is well-sampled for poverty and mostly families of color, a population of great interest due to the

disproportionate impact of poverty on families of color broadly and African American families specifically.

This study is one of few to examine three separate components of social support as moderators of the relation between material hardship and parenting. We expect that all three forms of social support will moderate the relation between material hardship and harsh parenting, such that as social support increases, the relation between material hardship and harsh parenting will weaken. We expect to see differences in the moderation effect of different forms of social support. Specifically, we expect that tangible social support will have the strongest moderation effect, as availability of resources and instrumental aid most directly "matches" with the experience of material hardship.

Method

Participants

The study sample is drawn from 237 families who were part of the Study of Adolescent Neural Development (SAND), a substudy of the Fragile Families and Child Wellbeing Study (FFCWS; Reichman, Teitler, Garfinkel, & McLanahan, 2001). The FFCWS is a longitudinal cohort of 4,898 (52.4% male) children born in 20 large U.S. cities between 1998 and 2000 (Reichman et al., 2001). The study was sampled to represent American children born in urban centers with populations of over 200,000 between 1998 and 2000. In order to create a sample with above-average levels of economic disadvantage, the FFCWS cohort was oversampled for nonmarital births (~3:1). This sampling frame resulted in a sample with substantial socioeconomic disadvantage. For example, at the birth of the target child, 40% of the mothers reported less than a high school education, 25.3% reported having a high school degree or equivalent, 24.3% reported some college or technical training, and 10.7% reported having a

college degree or higher (see Reichman et al., 2001 for additional sociodemographic characteristics of the core FFCWS). FFCWS researchers interviewed families in the hospital following the birth of the target child, and when the target child was 1, 3, 5, 9, and 15 years of age. After completing interviews when the target child was 15, families living in Detroit, Toledo, and a portion of the Chicago subsamples were invited to take part in additional data collection at the University of Michigan as part of the SAND.

The present study includes data from all 237 families who participated. Most of the primary caregivers in the study were the biological mother (n=216), though other primary caregivers included biological fathers (n =11), adoptive mothers (n=4), grandmothers (n=4), aunt (n=1), and cousin (n=1). Primary caregivers endorsed the following racial identities: African American (n=189); White/ Caucasian (n=39); Multiracial (n=9); Asian (n=2); Unknown, (N=14). Slightly more than half of the teens were female (n= 125). The mean caregiver age was 42.04 years (SD= 6.46 years). Most adolescents were 15 years old at data collection (n= 143), though some had turned 16 (n = 83) or 17 (n=5) (mean age = 15.40 years, SD = 0.53 years). On average, parents reported gross annual incomes between $25,000 and $29,999, with over a third of families (n=101) reporting incomes below $25,000. Thus, recruitment methods resulted in a low-income sample that included many families living in poverty.

Study Protocol

Parents and adolescents in the SAND participated in a 1-day protocol that included collection of self-report, interviewer, observational, and biological data. Participants were provided lunch during the day and received compensation for their participation. During the visit, parents and adolescents completed the "Hot Topics" task, which was designed to elicit conflict and negative emotion (Hetherington, 1992). At the start of the day, parents and

adolescents were asked to identify common areas of conflict. Dyads were then asked to discuss the two conflicts rated most highly by both members of the dyad during an 8-minute videotaped discussion. Videotaped conflict discussions were later coded. SAND procedures included written consent by parents and verbal and written assent by adolescents. All assessments and measures were approved by the IRB of the University of Michigan and the IRB at Princeton University (FFCWS protocol).

Measures

Material Hardship. Material hardship was measured at age 15 using 7 mother-reported dichotomous (0= No, 1= Yes, α = .77) items about experiences in the past 12 months (e.g., evicted, received free food/meals, telephone service disconnected, borrowed money to pay bills) taken from the Survey of Income and Program Participation (Bauman, 1998) and the Social Indicators Survey (Social Indicators Survey Center, Columbia University School of Social Work, 1999). Total scores ranged from 0 to 7. The mean number of material hardships experienced was 1.62 (SD= 0.83).

Self- Report of Parenting. Parent and child reports of parenting were measured using items from the Alabama Parenting Questionnaire (Frick, 1991). In line with previous work done on the sample (Waller 2019), an index of harsh parenting was created by combining items from the Corporal Punishment (3 items) and Inconsistent Discipline (6 items) subscales and the Positive Parenting (6 items) subscale. Sample items from the Corporal punishment subscale include, "Your parents spank you with their hand when you have done something wrong" and "Your parents yell or scream at you when you've done something wrong". Sample items from the Inconsistent Discipline Subscale include "your parents threaten to punish you and then do not do it" and "You talk your parents out of punishing you after you have done something wrong."

Sample items from the Positive Parenting subscale include, “Your parents tell you that you are doing a good job” and “Your parents reward or give something extra to you for behaving well.” For each APQ item, parents and children were asked to rate how often behavior typically occurs within their home on a 5-point scale (0= Never, 4=Always). Total scores ranged from 0-36 (α = .79) for the harsh parenting subscale and 0 -24 (α = .67) for the Positive Parenting subscale. For the current study, the averaged z-scores of parent and child report for each parenting construct was used.

Observed harsh parenting. Videotaped conflict discussions were later coded using the System for Coding Interactions and Family Functioning (SCIFF; Lindahl & Malik, 2001), a coding scheme developed to assess global impressions of family functioning, in addition to the frequency, intensity, and duration of specific parent and child behaviors. The SCIFF used in this study was adapted for use with single- parent families and has demonstrated convergent validity with both parent and child reports of parenting in the same sample (Waller et al., 2019). The SCIFF assesses parenting that is directed from the parent to the child (e.g., rejection, invalidation, emotional support) and parent–child dyadic functioning (e.g., conflict and cohesiveness), taking into account visual cues, verbal content, and tone of voice. For the present study, we used a combination of the Rejection/ Invalidation and Coerciveness codes to index harsh parenting, as this index has demonstrated convergent validity with self-reports of parenting in a previous paper (Waller et al., 2019). The Rejection code captured the frequency and intensity with which a parent made critical, insulting, blaming statements to the child (e.g., "It makes me sick to look at you", "you're such a slob, how can you stand to have your room that messy?") or behaved in a way that was dismissing or ignoring of the child's feelings (e.g., sounding disgusted, dismissing, or condescending about a child’s complaint, behavior, or

expression of emotion). The Coerciveness code indexed the frequency with which a parent made threatening or manipulative statements to the child (e.g., "The next time you do that, you won't like the punishment", "I make the rules, you follow them") or used a threatening tone or body language towards the child. Each global code was rated on a five-point Likert-type scale (0 = *very low*, 4 = *high*), indicating the degree to which the behaviors are characteristic of the duration of the interaction. Total scores ranged from 0-8.

Social Support. The Interpersonal Support Evaluation List (ISEL-12; 12 items Cohen et al., 1985) measures the perceived availability of social support through self-report. The ISEL-12 yields a total score that describes overall perceived social support, and three subscales representing perceived availability of *appraisal* (advice or guidance), *belonging* (empathy, acceptance, concern), and *tangible* (help or assistance, such as material or financial aid) social support. Items from the Appraisal subscale (4 items, $\alpha = .66$) include, “There is someone I can turn to for advice about handling problems with my family” and “When I need suggestions on how to deal with a personal problem, I know someone I can turn to”. Items from the Belonging subscale (4 items, $\alpha = .63$) include, “If I wanted to have lunch with someone, I could easily find someone to join me” and, “I don’t often get invited to do things with others”. Items from the Tangible Support subscale (4 items) include, “If I were sick, I could easily find someone to help me with my daily chores” and, “If I needed some help in moving to a new house or apartment, I would have a hard time finding someone to help me” Items are rated on a four-point scale ranging from “definitely false” to “definitely true.” Scores for each subscale range from 0- 12.

Covariates. Parents completed a demographic questionnaire where they indicated their age in years and the gender of the target teen. Because over two-thirds of caregivers identified as African American, ethnicity was coded as African American/non- African American (0 =

African American, 1= non-African American). Ethnicity, a socially constructed category, was used as a covariate to control for differences in exposure to systemic racism and racial disparities in opportunity and exposure to stress and trauma (Bullock, 2008; Feagin, 2004; Lovell, 2008). Parent age was treated as a continuous variable.

Data Analysis Plan

I will first evaluate descriptive statistics and zero-order correlations between material hardship, parenting, and social support variables. Next, I will fit a series of regression models in which material hardship predicts harsh parenting, controlling for caregiver ethnicity, recruitment city, and child gender. All analyses will be performed using SPSS version 25 (IBM Corp., 2017). After testing whether data are missing at random, I will use multiple imputation to accommodate missing data. In line with the recommendations of Graham, Olchowski, and Gilreath (2007), I will use a total of 20 imputations. Before analyzing data, I will mean-center all predictor variables.

Does material hardship predict child and observational reports of harsh parenting? To test whether material hardship predicts harsh parenting, I will run two regression equations in which material hardship predicts 1) combined parent-child and 2) observer report of harsh parenting. In the first step, control variables (caregiver ethnicity, caregiver age, and child gender) will be entered as predictors of parenting. In the second step, material hardship will be entered as a main effect predictor of parenting.

Does social support moderate associations between material hardship and harsh parenting? To explore my primary aim, I will run six regression equations in which material hardship and each form of social support (appraisal, belonging, tangible) predict child and observer rating of harsh parenting. In the first step, control variables will be entered as predictors

of parenting. In the second step, material hardship and social support will be entered as main effect predictors of parenting. To test for moderation effects, I will mean center the predictor variables and created an interaction term between the material hardship and social support variables, which will then be entered into the third and last step of the regression.

Results

Correlations Between Study Variables

Table 8 presents bivariate correlations for all study variables. As expected, higher material hardship was associated with higher observed harsh parenting. There were no associations between material hardship and any other parenting outcome, though there was a trend towards an association with lower observed positive parenting. Material hardship was also negatively correlated with all three forms of social support. In addition to material hardship, there were statistically significant associations between family income-to-needs ratio and parenting outcomes. Specifically, families with a higher income-to-needs ratio (i.e., less impoverished) reported lower negative parenting. These significant correlations were all modest to small in effect size.

Main Effects of Material Hardship on Parenting

Hierarchical multiple linear regression models were used to assess the effects of material hardship on each parenting outcome separately. Parent ethnicity, child gender, mother marital status at birth, city, and days between FFCWS Wave 6 and SAND 15 were entered as covariates. Table 9 presents the unstandardized and standardized coefficients for each model. As expected, material hardship statistically significantly predicted observed negative parenting, β= .17, p= .02. Specifically, the model that included material hardship (R^2= .07, SE =.04, p =.07) explained an additional 3% of the variance in observed negative parenting compared to the model that

contained covariates only (R^2= .04, *SE* =.03, *p* =.15). This effect was small in magnitude. Unexpectedly, no other associations between material hardship and parenting were found. Thus, there was limited evidence of an association between material hardship and parenting.

Interactions Between Material Hardship and Social Support

Hierarchical multiple linear regression models were used to assess the independent contributions of parental social support and material hardship to parenting outcomes, as well as to examine potential moderating effects of social support on the relation between material hardship and parenting. Parent ethnicity, child gender, mother marital status at birth, city, and days between FFCWS Wave 6 and SAND 15 were all entered as covariates. To assess the moderating effects of social support, an interaction term was created using the product of mean-centered material hardship and social support variables and entered as a predictor of parenting. We separately examined three social support variables to ascertain differential associations between specific types of social support, material hardship, and distinct parenting outcomes. We reproduced and graphed significant or near-significant interactions at high (one standard deviation above the mean), moderate (mean), and low (one standard deviation below the mean) values for each parental social support variable using the "interactions" package within R (Long, 2019; R Core Team, 2021). We compared the statistical significance and direction of the simple slopes at each level of each social support variable to better assess specific moderation effects.

Appraisal. Table 10 presents the unstandardized and standardized coefficients of regression analyses testing the effects of material hardship and appraisal on parenting. Except for a small main effect of parental appraisal on self-report of negative parenting, β= -.15, *p* = .03, we did not find any effects of appraisal on parenting. We did find an interaction effect on self-report of positive parenting that was trending towards significance, β= .13, *p* = .07 (See Figure 6).

However, the simple slopes at high, mean, and low appraisal were not statistically significant. Thus, appraisal did not appear to robustly moderate the relation between material hardship and self-report of negative parenting.

Belonging. Table 11 presents the unstandardized and standardized coefficients of regression analyses testing the effects of material hardship and appraisal on parenting. We did not find any effects of parental belonging on parenting, nor did we find a statistically significant interaction of material hardship and belonging. However, we did find a small interaction effect on observed positive parenting that was trending towards significance, β= .14, p = .07 (Figure 7). Simple slopes analysis demonstrated a statistically significant inverse relation between material hardship and observed positive parenting at low, but not mean or high levels of belonging. Specifically, greater material hardship predicted lower observed positive parenting when the zero-floored value of belonging was less than 4.26 (which included 40 participants in the sample). Thus, reporting high or average levels of belonging seemed to buffer the negative association between material hardship and positive parenting.

Tangible Support. Table 12 presents the unstandardized and standardized coefficients of regression analyses testing the effects of material hardship and tangible support on parenting. Parental tangible support predicted less observed negative parenting, β= -.17, p = .02 and higher observed positive parenting, β= .17, p = .02. The effect size for this association was small. Although we did not find a statistically significant interaction effect of material hardship and tangible support on any of the parenting variables, we did find a small interaction effect on self-report of negative parenting that was trending towards significance, β= .13, p = .08 (Figure 8). However, the simple slopes at high, mean, and low tangible support were not significant. Thus,

in contrast to our hypotheses, tangible support did not moderate the relation between material hardship and observed negative parenting.

Analyses with Income-to-Needs Ratio

In order to test whether material hardship predicted parenting outcomes over and above traditional income-based indicators of poverty, we ran all models above with income-to needs ratio as an additional covariate. We did not find a statistically significant effect of income-to-needs ratio on any of the parenting outcomes. Further, the pattern of main effects and interaction effects was identical to the models without income-to-needs. Result are shown in Table 13.

Discussion

The present study tested whether social support moderated associations between material hardship and parenting in a sample of 237 low-income families of adolescents. With few exceptions, we did not find statistically significant main effects of material hardship on parenting, nor did we find statistically significant interactions between social support and material hardship predicting parenting. Thus, we found little evidence of an association between material hardship and parenting once children reach adolescence, and some evidence that low social support may be a risk factor for parents experiencing material hardship. These findings are strengthened by the use of a proximal measure of family financial circumstance, parenting data from multiple informants, and a sample that is well-sampled for poverty.

Consistent with our hypotheses, we found some evidence that social support buffers the relation between material hardship and parenting. Specifically, we found that the relation between material hardship and observed positive parenting was only significant at low levels of belonging. In other words, parents who perceived more limited availability of people with whom to do activities were observed to be less warm and supportive with their children as material

hardship increased. In contrast, at moderate or high levels of belonging, there was no statistically significant association between material hardship and observed positive parenting. These results suggest that belonging buffers the stressful effects of material hardship on parents, thus allowing parents to maintain a relatively positive parenting environment. These results are consistent with prior work showing that social support buffered the relation between ecological risk and positive parenting in a low-income Latino sample (Prelow et al., 2010). In contrast to that study, in which material hardship was part of a latent ecological risk variable and multiple forms of social support were combined into one measure, we identified specific effects of material hardship and belonging, and our sample was majority African American. While the present study suggests that even average levels of social support are sufficient to buffer the association between material hardship and parenting, it is important to note that the effect size was small and did not survive correction for multiple comparisons. Thus, we are cautious in our interpretation of this finding.

In contrast, there were no other interactions between material hardship and social support on any other parenting outcome. This lack of findings spanned multiple analyses including 3 forms of social support and 4 different parenting outcomes (observed negative and positive parenting, self-report of negative and positive parenting). There are several possible explanations for these null findings: For one, material hardship was significantly inversely correlated with each form of social support, potentially inflating the standard errors of the regression coefficients and confounding analyses (Groebner et al. 2011). As a supplemental analysis, we created contingency tables with low (up to 33rd percentile), medium (between 34th and 66th percentile) and high (67th percentile and above) categories for material hardship and each social support variable (See Table 7). Across all social support variables, there were relatively fewer participants who were both high on material hardship and on social support, and thus there might

not have been enough coverage to detect a moderation effect. This trend is in line with evidence that indicates that conditions typically associated with disadvantage, such as material hardship, relate to less informal support (Henly et al., 2005; Jackson et al., 2000; Kang, 2013).

Second, past studies exploring links between material hardship and parenting have focused mainly on early and middle childhood (e.g., Gershoff et al., 2007; Kang, 2013; Heflin et al., 2011), with less known about these associations as children reach adolescence. Parents who have adolescent children may have had more time to habituate and adapt to experiences of material hardship and learn ways of coping, thus making them more resilient in terms of parenting outcomes. Thus, it is possible that the effects of material hardship on parenting are mediated, to some extent, by the child's age. Another distinction is that past work has examined cumulative, rather than current, material hardship. For example, Gershoff et al. (2007) included the number of months that the family's current hardship conditions had endured on as one of their hardship indicators and found that longer lasting material hardship was related to more physical punishment and less warmth. Thus, it is possible that cumulative experiences of material hardship, as well as the stability of hardship over time, are more predictive of parenting than a family's current circumstance. Though the scope of this study was proximal material hardship, future work might examine cumulative material hardship in samples with families of adolescents.

Though this study contributes to the literature on parenting in the context of poverty, there are several limitations to highlight. Firstly, the social support measure used in the current study does not indicate *who* is supporting the parent or how many people are in the parent's social support network. Thus, we are unable to make inferences regarding what specific kind of social support configuration is most beneficial for parents living in poverty. Second, the sample

was a community sample and thus findings may not extend to specific populations, such as families living in shelters or parents referred for investigation by social services. Third, each past year material hardship indicator was measured as a "yes/no" binary categorical variable. To better test the effects of material hardship on families, future studies might measure both the frequency and chronicity of various material hardships, in addition to distinguishing between acute and chronic hardship. Fourth, as research suggests that links between material hardship and parenting are mediated, in part, by parental mental health (Masarik & Conger, 2017), incorporating measures of parental mental might be an important future direction. Fifth, our study measured *perceived* support, as opposed to actual support received. Though perceived support has been shown to predict multiple outcomes, assessing perceptions of support introduces the potential to measure self-esteem, personality, or mental health characteristics, rather than actual support availability (Sarason et al., 1990). Sixth, it is important to highlight that the sample used in this study is mostly from Detroit and Toledo, which are relatively inexpensive cities; thus, material hardship may not have been better than family income as a predictor of parenting. Lastly, as the hardship measure used was over 20 years old, it may not have captured types of hardship that have become more relevant, such as lack of access to reliable internet- which has been shown to limit access to employment and social connections in samples of people living in poverty (Gonzales, 2016).

This study has several strengths. By using material hardship as our main predictor of parenting as opposed to household income or income-to- needs, we used a more proximal measure of family circumstance. And indeed, all our findings remained even after controlling for income-to-needs. The study also benefitted from the use of multiple parenting informants and a well-sampled dataset. These results highlight important directions for future research and

highlight that many parents experiencing material hardship demonstrate resilience in maintaining a positive parenting environment.

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Table 8: Correlations Between All Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Income to needs ratio	-													
2. Material Hardship	**-.14***	-												
3. Negative Parenting [Observed]	-.04	**.20***	-											
4. Negative Parenting [Self-Report]	**-.16***	.11	**.29****	-										
5. Positive Parenting [Observed]	.09	**-.13**†	**-.43****	**-.24****	-									
6. Positive Parenting [Self- Report]	-.04	-.04	-.01	**-.15***	.02	-								
7. Social Support- Appraisal	.04	**-.21****	**-.16***	**-.16***	**.13**†	.10	-							
8. Social Support- Belonging	.01	**-.15***	-.11	-.08	.01	.04	**.56****	-						
9. Social Support- Tangible	.06	**-.29****	**-.24****	-.08	**.22****	.06	**.64****	**.57****	-					
10. Parent Ethnicity	**.20****	**-.19***	**-.13**†	.09	**.16***	.03	.06	.02	.06	-				
11.Child Gender	-.04	.02	.02	.09	-.10	-.11	**-.12**†	-.09	-.07	.05	-			
12. Mother Marital Status at Childbirth	**.35****	**-.15***	**-.14***	**-.20****	**.19***	**-.15***	**.17***	.03	**.14***	**.26****	-.09	-		
13. City	.07	**-.17***	-.06	.03	-.01	.002	.07	.05	.05	**.29****	-.02	-.05	-	
14. Days between FFCWS and SAND	.01	.04	.09	.01	-.02	.05	-.04	.08	-.07	**-.12**†	-.02	-.09	.002	-

Note. $^{*}p < .05$, $^{**}p < .01$, †trending towards significance

Table 9: Multiple Regression Analyses Testing Effects of Material Hardship on Parenting Outcomes

Predictors	Parenting Outcomes							
	Observed Negative Parenting		Self- Report Negative Parenting		Observed Positive Parenting		Self-Report Positive Parenting	
	B	***β***	*B*	***β***	*B*	***β***	*B*	***β***
STEP 1								
Parent Ethnicity (African- American vs. Non- African-American)	-.27	-.07	-.09	-.06	**.35***	**.14***	.13	.07
Child Gender	.09	.03	.11	.08	-.20	-.09	**-.21***	**-.14***
Mother Marital Status at Childbirth	-.45	-.11	**-.29***	**-.17***	**.44***	**.16***	**-.36***	**-.19***
City	-.22	-.07	.04	.03	-.03	-.01	-.03	-.02
Days between FFCWS Age 15 and SAND 15	.001	.09	.00	-.01	.00	-.01	.00	.04
STEP 2								
Parent Ethnicity (African- American vs. Non- African-American)	-.23	-.06	-.08	-.05	**.34***	**.14***	.13	.07
Child Gender	.07	.02	.09	.07	-.21	-.10	**-.20***	**-.13***
Mother Marital Status at Childbirth	-.32	-.08	**-.27***	**-.16***	**.33†**	**.12†**	**-.42****	**-.22****
City	-.09	-.03	.05	.04	-.09	-.04	-.05	-.03
Days between FFCWS Wave 6 and SAND 15	.001	.08	.00	-.01	.00	-.03	.00	.05
Material Hardship	**.15***	**.17***	.03	.08	-.05	-.09	-.02	-.05

Note. *p < .05, **p < .01. †Trending towards significance

FFCWS Wave 6 = Fragile Families and Child Well-being Study, Age 15 (Wave 6), SAND 15 = Study of Adolescent Neural Development, Age 15

Table 10: Multiple Regression Analyses Testing Effects of Material Hardship and Appraisal on Parenting Outcomes

Predictors	Parenting Outcomes							
	Observed Negative Parenting		Self- Report Negative Parenting		Observed Positive Parenting		Self-Report Positive Parenting	
	B	***β***	*B*	***β***	*B*	***β***	*B*	***β***
STEP 1								
Parent Ethnicity (African- American vs. Non- African-American)	-.21	-.06	-.08	-.05	**.32**†	**.13**†	.12	.07
Child Gender	.07	.02	.08	.06	-.22	-.10	**-.18**†	**-.12**†
Mother Marital Status at Childbirth	-.26	-.07	**-.24***	**-.14***	.30	.11	**-.45****	**-.23****
City	-.11	-.03	.05	.04	-.05	-.02	-.06	-.04
Days between FFCWS Age 15 and SAND 15	.001	.07	.000	-.01	.000	-.03	.000	.05
Material Hardship	**.13***	**.15***	.02	.05	-.04	-.07	-.02	-.04
Appraisal	-.06	-.10	**-.04***	**-.15***	.02	.06	.02	.08
STEP 2								
Parent Ethnicity (African- American vs. Non- African-American)	-.21	-.06	-.08	-.05	**.32**†	**.13**†	.12	.07
Child Gender	.07	.02	.08	.06	-.22	-.10	**-.18**†	**-.12**†
Mother Marital Status at Childbirth	-.26	-.06	**-.24***	**-.14***	.30	.11	**-.46****	**-.24****
City	-.12	-.04	.06	.04	-.05	-.02	-.06	-.03
Days between FFCWS Wave 6 and SAND 15	.001	.07	.000	-.01	.000	-.02	.000	.05
Material Hardship	**.12***	**.14***	.02	.06	-.03	-.06	-.01	-.02
Appraisal	-.05	-.09	**-.04***	**-.16***	.01	.03	.02	.06
Material Hardship x Appraisal	-.02	-.06	.01	.08	.02	.11	**.02**†	**.13**†

Note. $^{*}p < .05$, $^{**}p < .01$, †Trending towards significance

FFCWS Wave 6 = Fragile Families and Child Well-being Study, Age 15 (Wave 6), SAND 15= Study of Adolescent Neural Development, Age 15

Table 11: Multiple Regression Analyses Testing Effects of Material Hardship and Belonging on Parenting Outcomes

Predictors	Parenting Outcomes							
	Observed Negative Parenting		Self- Report Negative Parenting		Observed Positive Parenting		Self-Report Positive Parenting	
	B	***β***	*B*	***β***	*B*	***β***	*B*	***β***
STEP 1								
Parent Ethnicity (African- American vs. Non- African-American)	-.21	-.06	-.06	-.04	.32†	.13†	.11	.06
Child Gender	.06	.02	.10	.07	-.22	-.10	-.19†	-.12†
Mother Marital Status at Childbirth	-.35	-.09	-.26*	-.15*	.32	.11	-.43**	-.22**
City	-.10	-.03	.04	.03	-.05	-.02	-.05	-.03
Days between FFCWS Age 15 and SAND 15	.001	.09	.000	.001	.000	-.03	.000	.05
Material Hardship	.13*	.15*	.03	.07	-.05	-.09	-.02	-.05
Belonging	-.06	-.09	-.02	-.05	-.01	-.03	.01	.03
STEP 2								
Parent Ethnicity (African- American vs. Non- African-American)	-.20	-.06	-.06	-.04	.32†	.13†	.11	.06
Child Gender	.06	.02	.10	.07	-.21	-.10	-.19†	-.12†
Mother Marital Status at Childbirth	-.34	-.09	-.27*	-.16*	.29	.10	-.44**	-.22**
City	-.11	-.03	.04	.03	-.04	-.02	-.05	-.03
Days between FFCWS Wave 6 and SAND 15	.001	.09	.000	-.003	.000	-.03	.000	.05
Material Hardship	.13†	.15†	.03	.09	-.04	-.06	-.02	-.04
Belonging	-.06	-.08	-.02	-.06	-.02	-.04	.01	.02
Material Hardship x Belonging	-.01	-.03	.02	.09	.04†	.14†	.01	.04

Note. $^{*}p < .05$, $^{**}p < .01$, †Trending towards significance

FFCWS Wave 6 = Fragile Families and Child Well-being Study, Age 15 (Wave 6), SAND 15= Study of Adolescent Neural Development, Age 15

Table 12: Multiple Regression Analyses Testing Effects of Material Hardship and Tangible Support on Parenting Outcomes

Predictors	Parenting Outcomes							
	Observed Negative Parenting		Self- Report Negative Parenting		Observed Positive Parenting		Self-Report Positive Parenting	
	B	***β***	*B*	***β***	*B*	***β***	*B*	***β***
STEP 1								
Parent Ethnicity (African- American vs. Non- African-American)	-.24	-.07	-.09	-.06	**.36**†	**.14**†	.10	.06
Child Gender	.08	.02	.09	.07	-.21	-.10	**-.19**†	**-.13**†
Mother Marital Status at Childbirth	-.24	-.06	**-.23**†	**-.13**†	.23	.08	**-.42****	**-.21****
City	-.10	-.03	.04	.03	-.06	-.03	-.06	-.04
Days between FFCWS Age 15 and SAND 15	.001	.06	.000	-.01	.000	.000	.000	.05
Material Hardship	**.10**†	**.12**†	.02	.06	-.02	-.03	-.02	-.05
Tangible	**-.11***	**-.17***	-.02	-.06	**.07***	**.17***	.02	.06
STEP 2								
Parent Ethnicity (African- American vs. Non- African-American)	-.24	-.07	-.09	-.06	**.36**†	**.14**†	.10	.06
Child Gender	.08	.03	.09	.06	-.21	-.10	**-.19**†	**-.13**†
Mother Marital Status at Childbirth	-.23	-.06	**-.21**†	**-.12**†	.24	.09	**-.40****	**-.21****
City	-.09	-.03	.06	.04	-.05	-.02	-.04	-.03
Days between FFCWS Wave 6 and SAND 15	.001	.06	.000	-.01	.000	.000	.000	.05
Material Hardship	**.11**†	**.13**†	.04	.10	-.01	-.02	-.01	-.02
Tangible	**-.11***	**-.18***	-.02	-.07	**.07***	**.17***	.02	.05
Material Hardship x Tangible	.01	.03	**.02**†	**.13**†	.004	.02	.01	.08

Note. $^{*}p < .05$, $^{**}p < .01$, †Trending towards significance

FFCWS Wave 6 = Fragile Families and Child Well-being Study, Age 15 (Wave 6), SAND 15= Study of Adolescent Neural Development, Age 15

Table 13: Multiple Regression Analyses Testing Effects of Material Hardship and Social Support on Parenting Outcomes

Model	Parenting Outcomes							
	Observed Negative Parenting		Self- Report Negative Parenting		Observed Positive Parenting		Self-Report Positive Parenting	
	B	***β***	*B*	***β***	*B*	***β***	*B*	***β***
Main Effects								
Material Hardship	**.17****	**.20****	.04	.07	**-.07**†	**-.12**†	-.02	-.04
Moderation: Appraisal								
Material Hardship	**.14***	**.17***	.03	.09	-.05	-.08	-.01	-.02
Appraisal	-.06	-.10	**-.04***	**-.16***	.03	.07	.02	.06
Material Hardship x Appraisal	-.02	-.07	.01	.06	.02	.11	.01	.10
Moderation: Belonging								
Material Hardship	**.15***	**.18***	**.05**†	**.12**†	-.05	-.09	-.02	-.04
Belonging	-.05	-.07	-.02	-.05	-.02	-.03	.01	.03
Material Hardship x Belonging	-.01	-.04	.01	.08	**.04***	**.16***	.004	.02
Moderation: Tangible Support								
Material Hardship	**.13***	**.15***	**.05**†	**.12**†	-.03	-.05	-.10	-.02
Tangible Support	**-.11***	**-.18***	-.02	-.08	**.08***	**.20***	.01	.03
Material Hardship x Tangible	.01	.03	**.02**†	**.13**†	.003	.01	.01	.07

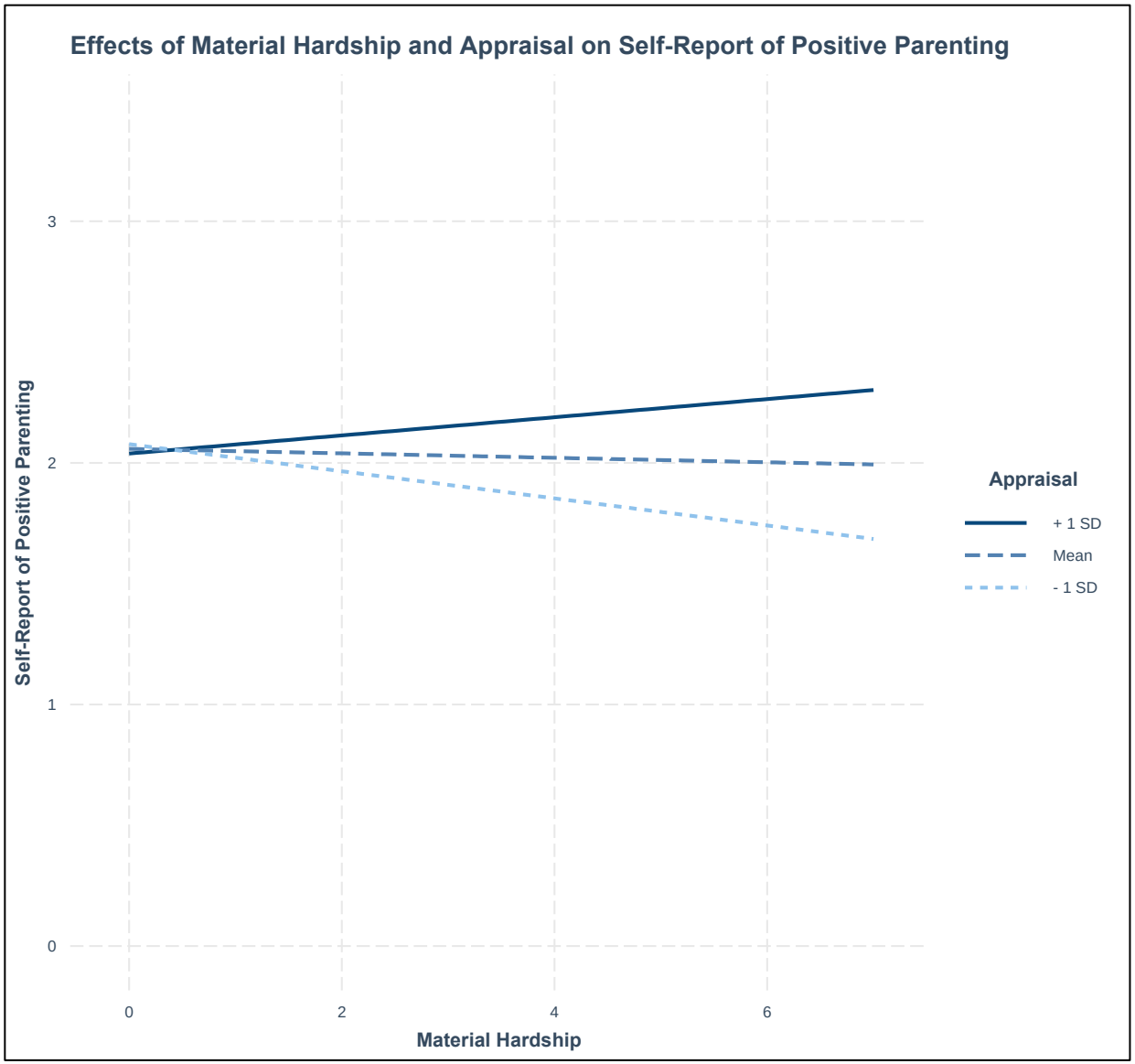
Note. $^{*}p < .05$, $^{**}p < .01$, †Trending towards significance

Table 14: Contingency Table of Material Hardship and Social Support Variables

	Appraisal			**Belonging**			**Tangible Support**		
	Low	*Moderate*	*High*	*Low*	*Moderate*	*High*	*Low*	*Moderate*	*High*
Material Hardship									
Low	34	27	46	35	28	44	31	36	40
Moderate	27	18	30	23	19	33	32	19	24
High	25	19	11	20	20	15	29	19	7

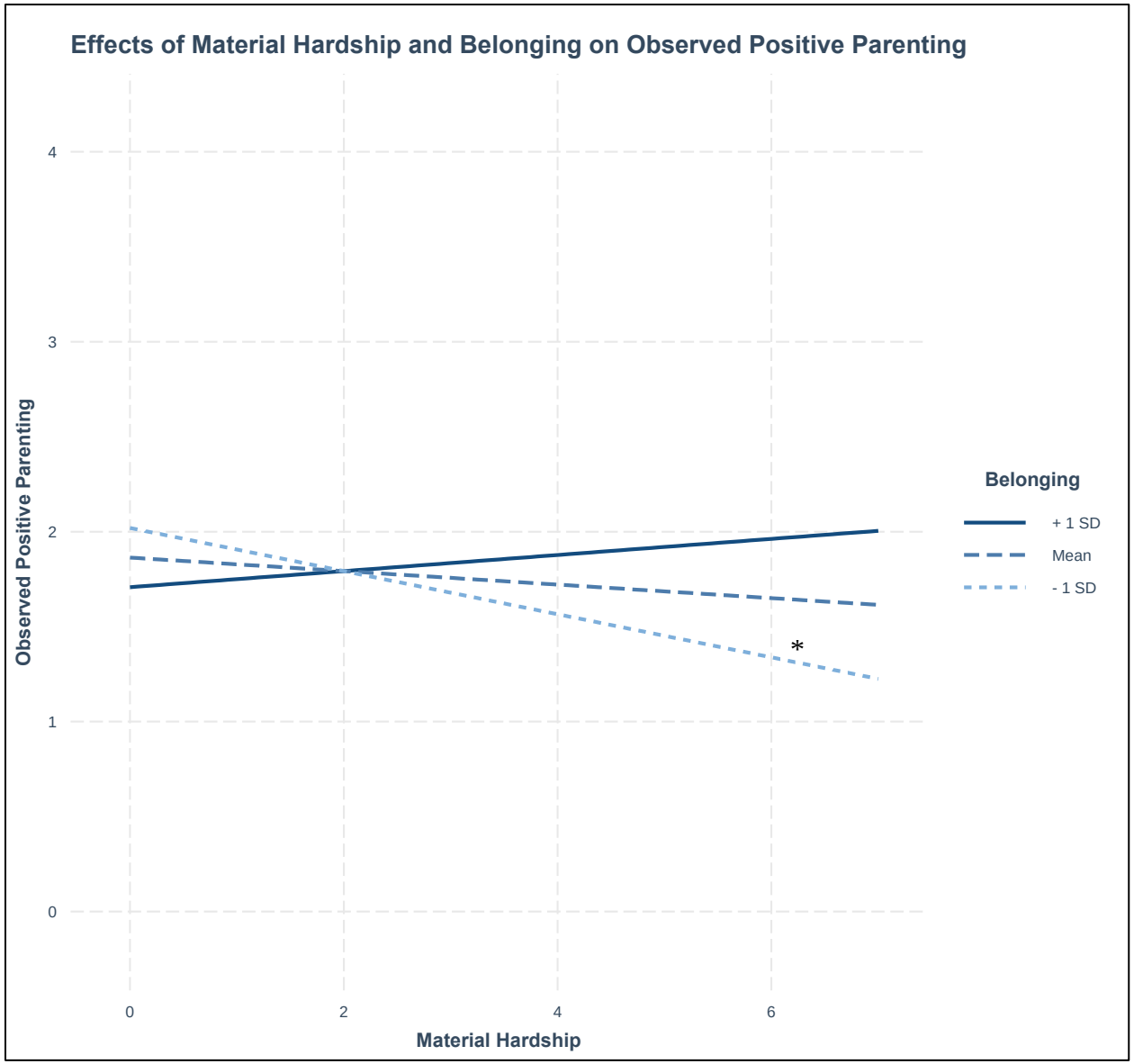
Note. Three separate full-sample (N=237) contingency tables are shown. All values are frequency counts of participants within each intersecting material hardship and social support category. The Pearson's chi-square test results indicate that for these hypothetical data there is an association between material hardship and tangible support (p-value= .006), and an association between material hardship and appraisal that is trending towards significance (p-value= .06). In contrast, there is not an association between material hardship and belonging (p-value= .34).

Figure 6: Effects of Material Hardship and Appraisal on Self-Report of Positive Parenting



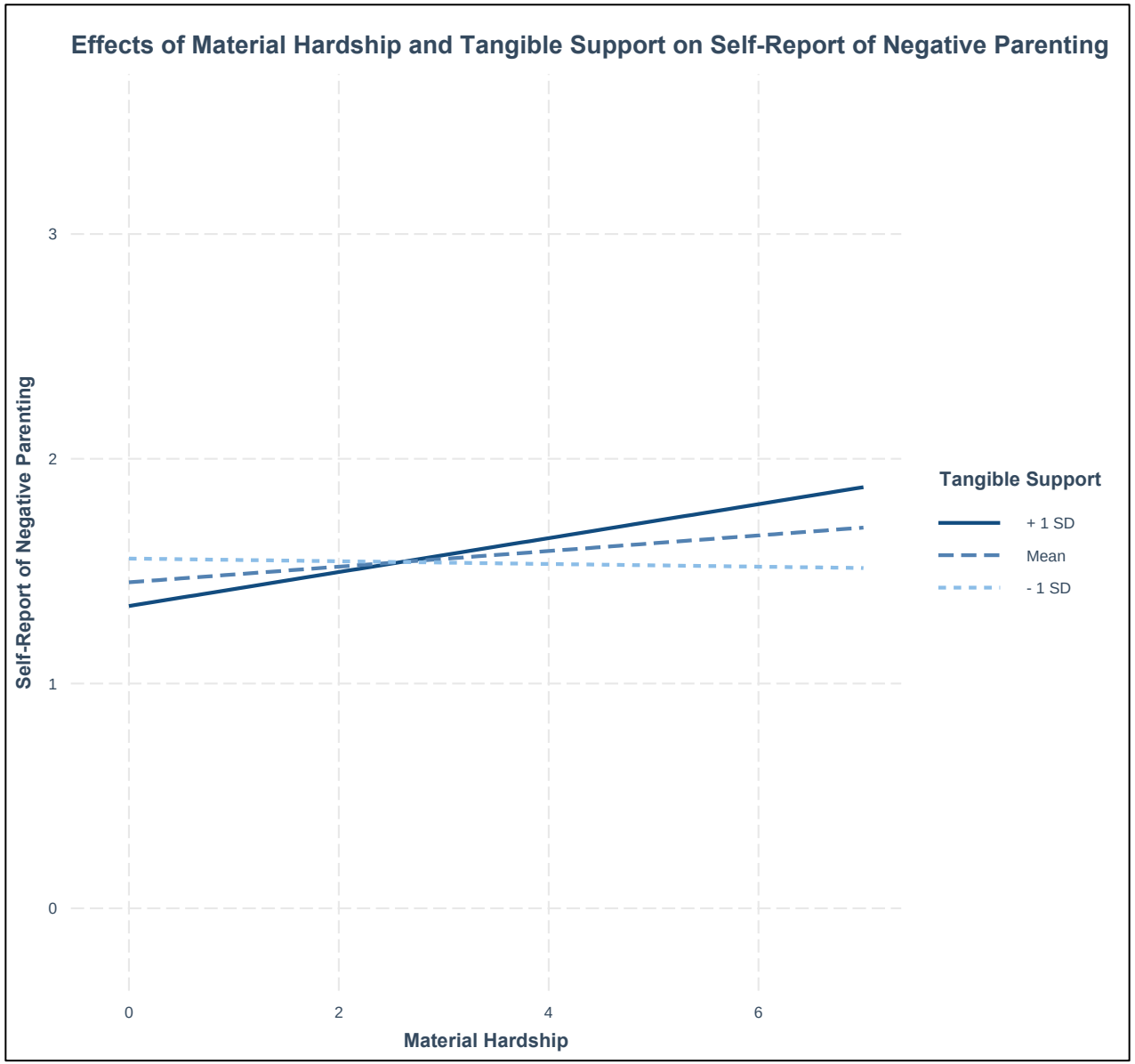
Plot illustrating the interaction between material hardship and appraisal in predicting self-report of positive parenting. The continuous moderator (appraisal) has been plotted at +/- 1

Figure 7: Effects of Material Hardship and Belonging on Observed Positive Parenting



Plot illustrating the interaction between material hardship and appraisal in predicting observed positive parenting. The continuous moderator (belonging) has been plotted at +/- 1 standard deviation (SD) and mean intervals. A Johnson-Neyman interval shows that material hardship and observed positive parenting are significantly, inversely correlated when belonging is less than 4.26 (*n*= 40). The range of belonging values (floored at zero) in the data are 0, 9]. This figure illustrates that at relatively low levels of belonging, material hardship and observed positive parenting are negatively correlated. The star next to the line indicates a significant slope.

Figure 8: Effects of Material Hardship and Tangible Support on Self-Report of Negative Parenting



Plot illustrating the interaction between material hardship and tangible support in predicting self-report of negative parenting. The continuous moderator (tangible support) has been plotted at +/- 1 standard deviation (SD) and mean intervals. There is not a significant association between material hardship and self-report of negative parenting at any level of tangible support.

Chapter 4: Community Violence Exposure as a Risk Factor For Adolescents' Attitudes About Violence

Introduction

Community violence exposure (CVE) is a serious public health problem affecting millions of children and adolescents each year. Though there is no one universally agreed-upon definition of CVE, researchers typically define and measure CVE as experiencing or witnessing interpersonal harm or threats of harm within one's neighborhood or community. This definition excludes other forms of violence such as domestic violence, physical maltreatment, sexual abuse, peer bullying, and media and video game violence. In nationally representative samples of youth living in urban and nonurban areas, over a third of youth reported witnessing violence in their communities in the past year (Finkelhor, Turner, Shattuck, & Hamby, 2015; Zinzow et al., 2009). Apart from witnessing violence, it is estimated that over half of adolescents in urban areas are directly victimized by community violence in a given year (Aisenberg, Ayón, & Orozco-Figueroa, 2008; Lambert, Nylund-Gibson, Copeland-Linder, & Ialongo, 2010). Of particular concern is gun violence, as deaths involving guns are currently the second-leading cause of death amongst all U.S. children and adolescents (Centers for Disease Control, 2018).

Rates of exposure to community violence tend to be highest among adolescents, who spend the most unstructured time outside the home (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996; Collins & Steinberg, 2006). Findings are mixed in terms of gender differences in CVE, with some studies reporting that boys have higher rates of exposure (Menard & Huizinga, 2001; Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998) and others reporting that

boys and girls experience equal amounts, particularly in the few studies that have included gender-based harassment in their definition of CVE (Aisenberg et al., 2008; Lambert et al., 2010, Turner, Finkelhor, & Ormrod, 2006). Additionally, low-income racial/ethnic minority adolescents consistently report disproportionately high levels of CVE (Gibson, Morris, & Beaver, 2009; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003). Thus, low-income adolescents of color, especially those residing in urban areas, are an important group to consider in CVE research, as they comprise a particularly vulnerable population.

Community violence exposure is consistently associated with a host of negative outcomes for children and adolescents, such as symptoms of depression (Ceballo, Ramirez, Hearn, & Maltese, 2003; Kennedy, Bybee, Sullivan, & Greeson, 2010; Lambert et al., 2010; Shahinfar, Fox, & Leavitt, 2000; Turner et al., 2006; Zinzow et al., 2009), anxiety (Cooley-Quille, Boyd, Frantz, & Walsh, 2001; Horowitz, McKay, & Marshall, 2005), and posttraumatic stress (Aisenberg et al., 2008; Allwood & Bell, 2008; Cooley-Quille et al., 2001; Denson, Marshall, Schell, & Jaycox, 2007; Scarpa, Hurley, Shumate, & Haden, 2006; Zinzow et al., 2009). A wealth of research also links CVE with higher rates of adolescent aggression and delinquency (Allwood & Bell, 2008; Scarpa et al., 2006). At chronically high levels of CVE, youth may become desensitized to the impact of violence (Kennedy & Ceballo, 2016), which may in turn increase their own use of violence to resolve problems or express emotions (Ng-Mak, Salzinger, Feldman, & Stueve, 2004). Decisions like joining a gang may be a response to the stress of CVE and a desire to adopt protective strategies. Joining a gang, in turn, has been associated with lower resilience (Li et al., 2002) and even suicidal behavior (Madan, Mrug, & Windle, 2011). In brief, CVE is a potent threat to adolescent well-being and adjustment. In order

to inform intervention strategies for youth exposed to community violence, it is important to identify specific mechanisms through which CVE influences later outcomes.

One manner in which CVE might impact outcomes is through its effect on how children think about violence. Dodge and colleagues (Dodge et al., 1990; Crick & Dodge, 1994) proposed a model of social information processing (SIP) which draws on social and cognitive theories of interpersonal interaction (Selman 1971; Newell & Simon, 1972). The SIP model posits that children process social information in a series of five cognitive processes: encoding a social cue, interpreting the cue, clarifying social goals, constructing a response, and deciding on the response (Crick & Dodge, 1994). In an elaboration of the last two stages of SIP, Fontaine and Dodge (2006) proposed a model of response evaluation and decision (RED) in which responses are evaluated, assigned outcome expectancies, and compared and prioritized for ultimate response selection. From a theoretical view, community violence exposure may impact children's response evaluation and decision-making through social learning mechanisms and coercive cycles (Bandura, 1986; Patterson, 1982). That is, children may learn that violence is an acceptable response to threat and imitate aggressive behaviors they have witnessed others commit.

Numerous studies have demonstrated that CVE leads children to adopt attitudes in favor of violence. For example, Guerra, Huesmann, and Spindler (2003) found that community violence exposure increased approval of violence in a sample of over 4,000 elementary school children. Similarly, Goldweber, Bradshaw, Goodman, Monahan, and Cooley-Strickland (2011) found that children with the highest levels of CVE endorsed justification of violence at the highest levels in a two-wave study of 429 children aged 7-13 living in communities with varying levels of neighborhood crime. Consistent with these findings, Shahifnar, Kupersmidt, and Matza

(2001) found that community violence victimization was positively correlated with approval of violence in a study of 110 male juvenile offenders aged 13-17. Bradshaw and Garbarino (2004) also found a positive association between community violence exposure and justification of aggression in a study of 184 adolescents at a suburban high school. Interestingly, though Bradshaw and Garbarino included other social cognitive constructs in their analyses, correlational data and factor loadings on their latent SIP variable suggested that justification of violence tended to have stronger correlations with violence exposure and aggression than did other SIP constructs. This finding suggests that CVE has a particularly profound impact on children's attitudes about violence. In addition, both Guerra and Bradshaw found that attitudes about violence mediated the link between CVE and aggression, suggesting that justification of violence is predictive of behavioral outcomes. After accounting for gender differences in CVE, neither Guerra nor Bradshaw nor Goldweber found gender differences for the effect of CVE on attitudes about violence, providing evidence of a similar mechanism for both genders.

However, not all children who are exposed to community violence develop negative outcomes. In order to create and refine strategies to promote resilience in children and adolescents exposed to community violence, it is important to examine factors that may attenuate the myriad of risks associated with CVE. Building on Bronfenbrenner's model of embeddedness of contexts (1979), Cicchetti and Lynch (1993) proposed an ecological-transactional model of community violence. Their model posits that individual development takes place within co-occurring mutually influencing levels of the environment (macrosystem/culture, exosystem/neighborhood, and microsystem/family). In their original elaboration of the model, Cicchetti and Lynch theorized that community violence is a feature of the exosystem that can act as a risk factor for the occurrence of violence within the microsystem/family. Conversely, the

presence of protective factors at any level of the ecology may help to explain why some children display successful adaptation in the face of violence within their communities (Harden & Koblinsky, 1999). At the level of the microsystem, positive parenting behaviors such as warmth and involvement, as well as a strong parent-child bond, may equip children with social skills necessary to cope with community violence exposure and create the connection necessary for parents to intervene in the face of adversity.

To the best of my knowledge, no study has examined how a positive parent-child relationship (i.e., one that is supportive and cohesive) might buffer the effects of community violence exposure on children's attitudes about violence specifically; however, several studies have shown that warm and nurturant parenting attenuates the links between CVE and other negative outcomes. For example, Brookmeyer, Henrich, and Schwab-Stone (2005) found that parental support weakened the relation between CVE and violence perpetration in a diverse longitudinal sample of over 1500 urban middle school students. In a sample of 263 Black and Latino adolescent boys, Gorman-Smith, Henry, and Tolan (2004) found that boys exposed to high rates of violence were less likely to perpetrate violence than similarly-exposed peers if they had families with high levels of warm and nurturing parenting.

In terms of psychological outcomes, Hardaway, McLoyd, and Wood (2012) found that strong positive parent-child relations weakened the relation between exposure to violence and anxiety in a sample of 391 low-income youth aged 13-17. In a similar vein, O'Donnell, Schwab-Stone, and Muyeed (2002) reported that among children exposed to CVE, parental support was a strong predictor of resilience in the domains of substance abuse and depression in a sample of 2,600 sixth, eighth, and tenth graders from an urban public-school system. In sum, a positive

parental relationship is an important mechanism of resilience for children exposed to CVE across a variety of outcomes.

Given research demonstrating that CVE may influence outcomes by altering the way children think about violence and that positive parent-child relations moderates the relation between CVE and negative outcomes, it is important to examine whether a positive parental relationship might buffer the relation between CVE and children's attitudes about violence. While I know of no study that has directly examined this question, a number of studies have demonstrated a link between positive parenting and children's social cognition. For example, Haskett and Willoughby (2007) found that observations of nurturant parenting were positively related to more adaptive social cognitive patterns, such as benign attributions of intent, in a clinically-referred sample of 166 families of children aged 5-10. Additionally, Sypher and colleagues (2019) found that parental warmth was associated with less hostile and avoidant social goals in a sample of over 400 twins aged 6-10. Through the use of a twin design, this study demonstrated that the effects of parenting on SIP were not genetically mediated. Though these two studies provide evidence of positive parenting's effect on children's social cognition, research in this area remains limited. Thus, there is a need for more studies addressing this topic, specifically as it relates to the *quality* of the parent-child bond and not just the parents' own behaviors.

As most of the work examining parenting in the context of CVE has focused on the *mother*-child relationship, there is a paucity of research examining how biological fathers and father figures may confer additional support to children exposed to community violence. There are several reasons why including fathers is important. For one, research shows that it is common for low-income children of color to have a biological father or father figure present in their lives,

even if he does not reside with the mother (Cabrera et al., 2004). Second, research has demonstrated that, regardless of residence or biology, paternal closeness contributes to positive outcomes of adolescents, such as decreased internalizing and externalizing problems (King & Sobelewski, 2006; Yuan & Hamilton, 2006). Lastly, in one of the only studies to examine the role of paternal support in moderating the relation between CVE and outcomes, Ozer and Weinstein (2004) found that adolescents' perception of paternal helpfulness moderated the relation between CVE and PTSD symptoms. Specifically, adolescents who rated their fathers as less helpful reported higher PTSD symptoms as exposure to violence increased, whereas those rating their fathers as more helpful did not show this increase. Thus, there is evidence that fathers do contribute to child outcomes broadly, and in the context of CVE specifically.

Another methodological challenge to consider is that all of the aforementioned studies have used exclusively quantitative methods to address these research questions. Though beneficial to advancing our understanding of CVE's impacts on youth, survey measures may not fully capture the nuances of adolescents' attitudes about violence, particularly racial-ethnic minority adolescents. Qualitative work addressing CVE and subsequent attitudes about violence in racial/ethnic minority adolescents can aptly address some of these knowledge gaps.

There are several benefits to qualitative methods. For one, qualitative research can complement quantitative research by adding descriptive depth about psychological phenomena (Morrow, 2007; Nelson & Quintana, 2005). Moreover, qualitative research is effective in examining complex psychological phenomena as it is not constrained by predetermined variables, thus allowing for examination of all variables as they emerge during the discovery process (Hill, 2005; Morrow, Rakhsha, & Castaneda, 2001). In addition, qualitative research can establish clinical relevance of research to both clients and psychologists given the richness of

subjective experience that it captures. Lastly, qualitative methods may be particularly relevant for research in racial/ethnic minority populations specifically because it "allows [for] a rich, multifaceted, in-depth exploration of a phenomenon, grounded in the world view, vocabulary, and context-specific experiences of those studied" (Maton, Hrabowski, & Greif, 1998, p. 643).

The goal of the present study was to test whether parent-child cohesion moderated the association between CVE and attitudes about violence – specifically, attitudes about guns and violence – in a sample of low-income urban adolescents of color. The study addresses several gaps in the literature. First, this study is one of the first to examine the influence of parent-child cohesion on the relations between CVE and attitudes about violence. In addition, the present study examined adolescent relationships with female and male caregivers separately. Lastly, this study also incorporated qualitative data to better and more fully understand adolescents' perceptions about the utility of violence.

The following hypotheses were examined in this study:

1) Cross-sectionally, CVE will be associated with more favorable attitudes about guns and violence.
2) Higher levels of mother-child and father-child cohesion will be associated with less approval of guns and violence concurrently in wave 1.
3) While controlling for attitudes towards guns and violence at wave 1, CVE will be associated with more favorable attitudes towards guns and violence longitudinally.
4) Both mother-child and father-child cohesion will have an attenuating effect on the relations between CVE and attitudes about guns and violence cross-sectionally; specifically, greater mother-child and father-child cohesion will weaken the relations between CVE and favorable attitudes about guns and violence.

5) The qualitative interview data will reveal distinct themes that will add contextual depth to understanding adolescents' attitudes about violence.

Method

Participants

For the present study, we used data from the After-School Activity Study (ASAS), a two-wave longitudinal project aimed at identifying risk and protective factors for CVE in urban adolescents. For ASAS recruitment, researchers from the University of Michigan contacted two high schools in Detroit and Chicago. After obtaining permission from school administrators, observing classrooms and afterschool activities, and building rapport with students, members of the research team gave brief presentations about the study to students in the ninth, tenth, and eleventh grades. Recruitment packets with letters explaining the study were given to students to take home. Students under 18 years of age were given parental consent forms, while students who were 18 or older were given adult consent forms. Both letters and consent forms were available in English and Spanish. Overall, the response rates were 51% at the Chicago high school and 47% at the Detroit high school. The final wave 1 sample included 537 adolescents with a mean age of 15.56 years (SD= 1.03) and was 54% female. Adolescents reported the following racial/ethnic identities: Latino, 77.5% (n=416), African- American, 17.1% (n= 92), Asian-American, 3% (n=16), European-American, 0.4% (n= 2), Multiracial, 0.2% (n= 1), Other, 1.8% (n =10). Slightly less than two-thirds of the student participants (*n*=333) attended the Chicago high school, with the remainder attending the Detroit high school (n=204). Slightly less than a quarter (n=120) of students reported hanging out with adolescents who belong to gangs. Both schools serve primarily low-income families, as evidenced by the 82% of students who qualified for free or reduced school lunch across the Chicago and Detroit high schools. At wave

2, the sample included 437 adolescents with an attrition of 100 students (18%). The wave 2 sample did not differ significantly from the wave 1 sample on demographic or study variables. Demographic characteristics of the sample, as well as means, standard deviations, and ranges of study variables at both waves are provided in Table 15.

Study Protocol

Students completed surveys at each of their respective high schools, on computers provided by the school, in the presence of research assistants who were available to answer questions throughout the survey administration. Students under 18 completed assent forms prior to starting their surveys. With the exception of two surveys that were completed in Spanish, all surveys were completed in English. Across both sites, wave 1 data collection occurred between November 2015 and April 2017, and wave 2 data collection took place between December 2016 and March 2018. Researchers followed Procedures for the Protection of Human Subjects and received approval from the University of Michigan Institutional Review Board. Students were compensated for their time with gift cards, receiving a $25 gift card after wave 1 and a $30 gift card after participation in wave 2.

Qualitative Data

A subsample of students who participated in the ASAS were selected for qualitative interviews. The aim of these interviews was to develop a rich understanding of urban youth's participation in after-school activities, experiences with exposure to community violence, and strategies for coping with community violence. For the current study, we only used qualitative data from students who also had survey data. The final qualitative sample included 45 adolescents and was 62% female. This sample had a mean age of 16.22 years (SD= 1.22). Of the 45 students who completed the ASAS, 4 of them were interviewed prior to completing their

wave 1 surveys, 25 were interviewed between wave 1 and wave 2, and 16 were interviewed after wave 2. Twenty interviewees attended the Detroit high school and 25 attended the Chicago high school.

Interview Protocol

The interview protocol consisted of several open-ended questions, soliciting students' experiences, thoughts, and feelings regarding their participation in after-school activities, reactions to community violence exposure, and strategies for coping with community violence. Interviewers were instructed to follow students' responses with additional questions and prompts, as appropriate, to solicit further details about their narratives and to clarify any ambiguous responses. Members of the research team interviewed students individually in empty classrooms or private rooms in the school building. On average, interviews lasted about 90 minutes. Except for one interview conducted in Spanish, all interviews were conducted in English. All interviews were digitally recorded and later transcribed verbatim. The present study relies on qualitative data obtained from adolescents' responses to two interview questions: 1) *Do you think any positive outcomes or good things can result from violence?* and 2) *Why do you think violence happens in your neighborhood?* These questions were chosen because of their potential to add descriptive depth to our understanding of urban adolescent attitudes towards violence.

It was heavily emphasized during the recruitment, consent, assent, and data collection phases that the interviews were to focus solely on violence that occurred in participants' communities, and not violence that may have occurred in the home. This was intended not only to clarify the purpose of the project and make participants and parents completely aware of what participation entailed, but also to avoid placing participants in the position of revealing domestic

violence in a non-clinical setting. Further, participants were instructed to omit mentioning people's real names, nick names, street or gang names during the course of the interview and were alerted if they accidentally revealed identifying information. Participants and their parents were made aware during the informed consent and assent processes that participants would be provided with a resource list of crisis hot lines whose help they were encouraged to seek out if they felt any discomfort or other negative feelings because of their participation in the study. Students at each school were interviewed and compensated for their time with gift cards of $25.

Quantitative Measures

Community Violence Exposure. Adolescents' exposure to community violence was assessed using questions adapted from the Survey of Exposure to Community Violence (Richters & Martinez, 1993). For the present study, we separated witnessing violence from personal victimization, as past work has suggested that witnessing and personal victimization have distinct effects on children's social-cognitive processes (Musher-Eizenman et al., 2004; Schwartz & Proctor, 2000). The witnessing violence subscale consisted of 13 items about past year experiences, such as "How many times have you seen someone else attacked or stabbed with a knife?" The personal victimization subscale consisted of 9 items assessing past year experiences, such as, "How many times have you yourself been chased by gangs or individuals?" Items about sexual assault were excluded. Adolescents indicated how often they witnessed violence or were personally victimized in the past year on a 7-point scale from 0 (never) to 7 (7 or more times). Possible scores on the witnessing violence subscale range from 0 to 91. Possible scores on the personal victimization subscale range from 0 to 63.

Attitudes about Violence. Adolescent attitudes about violence were assessed using the Attitudes Towards Guns and Violence Questionnaire (AGVQ; Shapiro, Dorman, Burkey, &

Welker, 1997). For the present study we created a subscale consisting of 13 gun-related items, which represent one of the more extreme forms of pro-violence attitudes. Sample items included, "It would be exciting to hold a gun in my hand" and "Carrying a gun makes people feel strong." Adolescents indicated the degree to which they agreed with each statement on a 3-point scale (0= disagree; 1= not sure; 2= agree). Scores ranged from 0 to 26. Anti-gun statements were reverse-coded so that higher scores always indicated more favorable attitudes about guns and violence. Cronbach's alpha for this scale was .76 in our sample. Table 16 displays response frequencies for these items. It is important to note that our measure is distinct from past SIP measures of attitudes towards violence (Fontaine & Dodge, 2006) in two ways. One, the measure used in this study focuses specifically on the use of guns, as opposed to use of aggression more broadly. Second, the measure we used does not elicit how adolescents would behave in specific social scenarios.

Parent-Child Cohesion. Students completed the cohesion subscale of the Family Adaptation and Cohesion Evaluation Scales II inventory separately for each parent (Olson, Sprenkle, & Russell, 1979). Using a 5-point scale (1= almost never; 5= almost always), students responded to 10 questions such as, "My mother [father] and I feel very close to each other," "My mother [father] and I are supportive of each other during difficult times," and "My mother [father] and I avoid each other at home" (reverse-scored). This scale has been validated for use in ethnic-minority samples broadly (Fuligni, 1998; Knight, Tein, Shell, Roosa, 1992). Possible scores range from 10 to 50. This scale possessed good overall internal consistencies for both mothers and fathers. In our sample, the Cronbach's alpha for father-adolescent cohesion was .87 and mother-adolescent cohesion was .86.

Covariates. Age, gender, ethnicity, school attended, and gang affiliated peers were entered as covariates for all analyses. Students completed a demographic form which included age, gender, ethnicity/ethnicity, and school. Age was entered in years. Gender was coded as 0= male, 1= female. Because over three-quarters of participants identified as Latino, ethnicity/ethnicity was coded as Latino/non-Latino (0 = Latino, 1= non-Latino). To control for school attended in the analyses, the Chicago high school was coded as "0," and the Detroit high school was coded as "1." In a separate section of the study, students were asked if they hang out with kids who are in a gang. As having gang-affiliated peers is a risk factor for increased community violence exposure, we decided to enter this variable as a covariate, where 0= no gang-affiliated peers and 1= at least one gang-affiliated peer.

Data Analysis Plan

Quantitative. For the current study, data from both waves were used to test associations between CVE and attitudes about guns and violence cross-sectionally and longitudinally. All analyses were completed in SPSS. To examine the effects of CVE on attitudes about guns and violence, we ran hierarchical multiple regression analyses in which five covariates (age, gender, ethnicity/ethnicity, school attended, and gang affiliated peers) were entered in the first step and each type of CVE (witnessing violence and personal victimization) was entered separately in the second step of the regression. To test whether parent-child cohesion moderated the relations between CVE and attitudes about guns and violence, an interaction term between each form of CVE (witnessing violence and personal victimization) and parent-child cohesion (maternal and paternal) was created and entered in the third and last step of the regression models. Separate models were run with every combination of CVE and parent-child cohesion variables and continuous variables were mean-centered.

Qualitative. Data analysis followed the tenets of thematic analysis (Strauss & Corbin, 1998). In particular, a process of "analytic induction" was followed by first relying on in-depth readings of interview responses for general thematic categories and constructs that addressed the proposed research questions. Line by line readings were conducted to identify emergent recurring themes and to develop a codebook. Finally, after multiple readings for general categories and themes, a coding scheme was developed to align with the themes identified, and all of the qualitative interviews were coded accordingly. Each interview was coded by two trained coders so that acceptable (greater than .85) levels of inter-rater reliability were established.

Results

Correlations Between Study Variables

Table 17 presents bivariate correlations for all study variables and covariates. As expected, higher rates of both witnessing violence and personal victimization were statistically significantly associated with more favorable attitudes about guns and violence. In addition, less favorable attitudes about guns and violence were associated with higher mother-child cohesion; however, there was not a statistically significant correlation between father-child cohesion and attitudes about guns and violence. Both witnessing violence and personal victimization were associated with lower mother-child cohesion. In contrast, father-child cohesion was only statistically significantly associated with witnessing violence, in the same direction. These statistically significant correlations were all modest to small in effect size.

Main Effects

Multiple linear regression models were used to separately assess the effects of witnessing community violence and personal victimization on adolescents' attitudes about guns and

violence cross-sectionally (at wave 1) and longitudinally (at wave 2). Tables 18 and 19 present results of the cross-sectional analyses, and Tables 20 and 21 present the longitudinal models. Age, gender, ethnicity/ethnicity, school attended, and gang affiliated peers at wave 1 were entered as covariates across all models. For the longitudinal models, attitudes about guns and violence at wave 1 was entered as an additional covariate.

As expected, witnessing violence significantly predicted more favorable attitudes towards guns and violence, $\boldsymbol{\beta}$= .17, $t(537)= 3.73$, $p<.05$. Specifically, the model that included witnessing violence ($R^2= .16$, $SE = 4.16$, $p<.05$) explained an additional 3% of the variance in attitudes about guns and violence compared to the model that contained covariates only ($R^2= .13$, $SE =4.11$, $p<.05$). Similarly, personal victimization predicted higher approval of gun use, $\boldsymbol{\beta}$= .22, $t(537)= 4.94$, $p<.05$, with the model including personal victimization ($R^2= .17$, $SE = 4.06$, $p<.05$) explaining an additional 4% of the variance in attitudes about guns and violence compared to the covariates-only model ($R^2= .13$, $SE = 4.16$, $p<.05$). Thus, we found evidence that both types of CVE were statistically significantly associated with adolescents' attitudes about guns and violence cross-sectionally, even after controlling for several demographic and social characteristics. In contrast, however, as seen in Tables 20 and 21, neither witnessing violence nor personal victimization at wave 1 significantly predicted change in attitudes about violence from wave 1 to wave 2. These main effects were all modest to small in magnitude.

In addition to these main effects of CVE, we also found modest main effects of gender and gang-affiliated peers. In the regression models including CVE variables, the unstandardized coefficient for gender was $b = -2.04$ in the witnessing model and $b= -1.77$ in the personal victimization model. This effect of gender persisted at wave 2, with an unstandardized coefficient of $b= -1.52$ in the witnessing model and $b= -1.49$ in the personal victimization model.

Thus, on average, males scored one to two points higher in favorable attitudes towards guns and violence than females. For gang-affiliated peers, the unstandardized coefficient was b = 1.91 in the witnessing model and b= 1.90 in the personal victimization model. These results suggest that, on average, adolescents who reported having gang-affiliated peers scored almost 2 points higher in holding favorable attitudes towards guns and violence than adolescents who did not have peers who belonged to gangs. Interestingly, reports of having gang affiliated peers at wave 1 did not predict change in attitudes about violence from wave 1 to wave 2.

Interactions

Hierarchical multiple linear regression models were used to assess the independent contributions of CVE and parent-child cohesion on the variance in adolescents' attitudes about guns and violence and to examine the potential moderating effects of parent-child cohesion on the relations between CVE and attitudes about violence. Age, gender, ethnicity/ethnicity, school attended, and gang affiliated peers were entered as covariates. Past year CVE (witnessing violence or personal victimization) and mother- or father-child cohesion were entered in the second step of the regression models. To assess the moderating effects of parent-child cohesion, interaction terms were created using the product of mean-centered CVE (witnessing and personal victimization) and parent-child (mother and father) cohesion variables. A total of four interaction models were run. We reproduced and graphed significant interactions at high (one standard deviation above the mean), moderate (mean), and low (one standard deviation below the mean) values for mother- and father-child cohesion using the "interactions" package within R (R Core Team, 2021). We compared the statistical significance and direction of the simple slopes at each level of parent-child cohesion variable to better assess specific moderation effects. Tables 22 through 25 show the results of these models.

As displayed in Tables 22 and 23, there were no statistically significant interactions in the models with past year witnessing violence, and neither mother- nor father-child cohesion was statistically significantly related to adolescents' attitudes about violence when also accounting for the covariates. In the regression models with personal victimization shown in Tables 24 and 25, we found a statistically significant main effect of mother child cohesion on attitudes towards guns and violence. Specifically, in the second step, greater mother-child cohesion was associated with less favorable attitudes towards violence, β= -.09, t(537)= -2.04, p<.05. In the models with personal victimization displayed in Tables 10 and 11, father-child cohesion was not statistically significantly associated with attitudes towards guns and violence. There was a statistically significant personal victimization X mother-child cohesion interaction, β=.09, t(537)= 2.20, p<.05. Both the main effect and interaction were modest in magnitude. The unstandardized coefficient for the product term, b=.01, indicated that the association between personal victimization and favorable attitudes towards guns and violence increased by .01 units for every 1-unit increase in mother-child cohesion. This statistically significant interaction is displayed in Figure 9. Simple slopes analysis demonstrated a statistically significant positive relation between personal victimization and attitudes about violence at low (-1 SD), mean, and high (+1 SD) levels of mother-child cohesion. As mother-child cohesion increased, the relation between personal victimization and favorable attitudes towards violence also increased. However, simple slopes analyses found that the association between the two was no longer statistically significant at zero-floored mother-child cohesion scores lower than 16.65. The n for participants outside this region of significance was 74, providing evidence that this finding was not driven by outliers. Thus, for adolescents with relatively low mother-child cohesion, there was not an association between personal victimization and attitudes about guns and violence.

Qualitative

Of the 42 students who were asked if any positive outcomes can result from violence, just over half (n = 23) responded "No", with the remaining students responding "Yes" (n= 8) and "Yes and No" (n = 11). Responses were missing or not applicable for three students. Up to two responses were coded. 13 of the students who identified positive outcomes associated with violence were female and 6 were male. Among the students who reported that no positive outcomes could result from violence, 10 were male and 13 were female. For the question about why violence happens, we have responses from 39 students- 24 female and 25 male. Responses were missing or not applicable for six students. Up to three responses were coded for this question.

Responses for each of the two questions were coded for the presence of several explanatory themes, which were then placed into two larger, superordinate categories representing individual benefits or social/structural benefits for those who indicated that violence could have positive outcomes. Similarly, explanatory codes for students' answers to the reasons why community violence happens were placed into individually focused explanations or social/structural reasons and explanation for violence. The inter-rater reliability was .87 for the question about positive outcomes resulting from violence and .89 for the question about the reasons why community violence happens.

Positive Outcomes for Community Violence

Individual. Students identified several types of positive outcomes from violence that centered around individual benefits. For one, some students identified experiences of violence as a motivator for applying new strategies for keeping oneself safe, such as, "trying to take other routes or just not communicating with other people (15-year-old female student)." Similarly, a

14-year-old female student identified violence as a means of self-defense, “like being violent to defend yourself, to help so you don’t get hurt” in situations such as robbery or assault. Students also asserted that violence could serve as a means of seeking justice, with one 16-year-old female student stating that, “some violence is justice… a guy rapes a young girl… her parents come home… and they end up shooting him.” Personal growth following violence was another positive outcome identified. For example, an 18-year-old male student explained that experiencing violence could lead someone, “to change their patterns in life… some people might be religious or… think about helping other people.” Finally, students stated that violence could be a means to obtain money or goods in challenging circumstances, with a 15-year-old female student proposing the following scenario: “let’s say your family… is going through a hard time and you need something. Like maybe it’ll help out…”. Within this response category, there were 7 female students and 3 male students.

Social/Structural. Students identified several types of positive outcomes from violence that centered on social or societal benefits. Firstly, students answered that violent events have the potential to bring communities together. For example, a 17-year-old male student expressed that violence could lead to community events, “like…movie nights…[that] could bring everybody together, so they’re not always in conflict.” In addition, students said that violence could lead to increased community action and raised awareness of violence, with one 16-year-old female student stating that violence, “could cause the community to… realize that things are happening and… change that.” Lastly, students asserted that violence could lead to structural changes, such as increased police presence: “maybe… more patrol around the area… by cops. Or… presence of more cops around the neighborhood maybe” (17-year-old-male student). There were 6 female students in this response category and 3 male students.

Reasons Why Community Violence Happens

Individual. Students identified multiple individual-level reasons for why violence happens in their communities. The most common type of individual-level reason for community violence given by students was an individual's own personality traits or background. Some students identified traits such as greed or a lack of concern for others as drivers for community violence, while others asserted that violence perpetration was a result of a person's own lack of guidance or the presence of negative role models in their lives. For example, a 15-year-old female student stated that violence happens because, "… people who actually commit violence…don't have as much support… or parents aren't there to…tell them what to think." Similarly, an 18-year-old male student stated that people who commit violence are, "… brought up that way, with their parents being either in jail, or involved with drug…that's their influence on how they act now." Other students stated that violence happens because of individual conflicts or disagreements, with 17-year-old male student saying, "I feel like violence just happens because, it's just – there's an everyday thing here that happens. I'm pretty sure it's just conflict between two people." In addition, students responded that violence occurs because of an individual's need for money or resources. A 15-year-old female student explained her thinking by stating, "…if people are robbing, maybe it's [because] they need something and they can't get it another way." Lastly, students responded that violence occurs for drug-related reasons, with some identifying people on drugs contributing to violence- "…drunk people fighting" (18-year-old male student)- and others identifying drug dealers as the cause: "I feel like, for the most part it's the drug dealing, it's over territory (18- year-old female student)." Over 90% (n= 36) students gave at least one individual-level reason for community violence. In total, 21 were female and 15 were male.

Social/Structural. Several social or structural reasons for community violence were given. For one, students identified gangs as source of community violence. In addition to citing violence occurring between gangs as the source of community violence, students identified social motivations for joining gangs. For example, a 16-year-old female student stated that people who join gangs, "don't like violence themselves so they get in a gang to feel safe." Students also identified broader structural reasons for community violence. A 16-year-old male student cited poverty, stating "I would say… the economics for us… and like all the money problems we have." They also cited intergroup conflict (i.e., between ethnicities) and police not taking violence seriously in their communities. Finally, a 16-year-old male student asserted that community violence occurs due to lack of opportunities for formerly incarcerated people, saying that, "…they can't go to work because on their record they're a criminal or felon or whatever, now they can't go to work because everybody doesn't want to accept them…So the only fast, quick money scheme is either your jumping people out their car for their wallets or your selling drugs." Twelve students gave at least one structural reason for community violence. 7 of these students were female and 5 were male.

Discussion

In order to inform intervention strategies for youth exposed to community violence, it is important to identify specific mechanisms through which CVE influences later outcomes. Thus, the present study tested whether parent-child cohesion moderated associations between CVE and attitudes towards guns and violence in a sample of low-income urban adolescents of color. We found that CVE was associated with more favorable attitudes about violence, whereas mother-child cohesion was associated with less favorable attitudes. There was some evidence that parent-child cohesion moderated the relation between CVE and attitudes about violence, though

these findings were limited and not in the expected direction. There were also statistically significant main effects of gender and gang-affiliated peers on attitudes towards guns and violence. Lastly, the qualitative data added descriptive depth and context to these findings.

The strengths of the study include the use of a large at-risk community sample with two waves of data, the incorporation of both quantitative and qualitative analyses, and the inclusion of reporting on male and female caregivers. These findings provide further evidence that community violence exposure may lead adolescents to adopt more favorable attitudes towards violence. Additionally, our findings suggest boys and adolescents who have gang-affiliated peers (regardless of gender) are more likely to have higher pro-violence attitudes, and thus are groups that should be especially considered when framing interventions. Lastly, analysis of the qualitative data suggests that many adolescents do not see violence as a means to achieve positive outcomes, and that when they do perceive positive outcomes, said outcomes are not antisocial in nature. Increasing access to counseling and programming in low-income urban high schools to mitigate the psychological impacts of community violence on adolescents may be an important step in disrupting cycles of violence.

We found some evidence that parent-child cohesion moderated the relation between CVE and attitudes towards guns and violence, though not in the expected direction. Specifically, the relation between personal victimization and attitudes about violence became stronger as mother-child cohesion increased. This suggests that adolescents reporting a strong supportive relationship with their mothers were more sensitive to the effects of personal victimization, which stands in contrast to previous work that has demonstrated that parenting weakens the relation between CVE and outcomes such as violence perpetration (Brookmeyer et al., 2005), anxiety (Hardaway et al., 2012), and PTSD (Ozer and Weinstein, 2004). We offer two

explanations for why these results differ from previous findings. First, as this is one of the few studies to examine attitudes towards violence as an outcome, it might be that parent-child cohesion interacts differently with CVE with respect to attitudes about guns and violence. Second, whereas the samples in the previously cited literature were around a quarter Latino, the sample in the present study was over three-quarters Latino. One of the common values shared across Latino families is *familismo* (Arditti, 2006), which entails having a strong sense of unity and loyalty to one's family, prioritizing family over personal needs, and relying upon family for instrumental and social support (Calzada, Fernandez, & Cortes, 2010; Halgunseth, Ispa, & Rudy, 2006). Our measure of parent-child cohesion, which contained items related to mutual support, closeness, and time spent together, contains many elements of *familismo*, and thus may have also served as an index of this value. Following personal victimization, Latino youth higher on *familismo* may be more prone to adopting more favorable attitudes towards guns and violence out of a heightened sense of responsibility for keeping family members safe, in addition to concerns about their own safety. However, it should also be noted that there was no statistically significant interaction of parent-child cohesion in other models, and the effect size was small. Thus, we are cautious in our interpretation of this finding.

Though our findings for moderation were limited, we did find that adolescents endorsed more favorable attitudes towards guns and violence as community violence exposure increased, even after controlling for demographic and social variables. These findings are consistent with prior work demonstrating positive associations between CVE and attitudes about violence cross-sectionally (Bradshaw & Garbarino, 2004; Shahifnar, Kupersmidt, and Matza, 2001). However, in contrast to Goldweber et al. (2011) and Guerra et al. (2003), we did not find longitudinal associations between CVE and attitudes towards violence. These conflicting findings were likely

due to the high stability of attitudes from Wave 1 to Wave 2 and the quantity of covariates in the model. Supplemental longitudinal analyses were conducted without covariates and both witnessing and personal victimization statistically significantly predicted more favorable attitudes about violence. These findings suggest that more recent experiences of CVE have stronger associations with attitudes about violence. Of note, our strongest and most consistent main effects were for gender and the presence of gang-affiliated peers. Across all models, male students and students who reported having gang-affiliated peers endorsed more favorable attitudes towards guns and violence. Students in these two groups also reported greater CVE, in line with previous work (Li et al., 2002; Menard & Huizinga, 2001; Selner-O'Hagan et al., 1998). Future work should test the extent to which the associations between gender and attitudes about guns, as well as gender and attitudes about gun use, are mediated by increased risk for CVE.

Lastly, there were several findings of note with the qualitative data. For one, half of students interviewed didn't think that there are any positive outcomes associated with violence, consistent with the low base rates of endorsement of attitudes about violence items. In terms of response categories, most students identified individual, versus social, benefits of and reasons for community violence, and we did not find gender differences with regards to the types of responses given. These results suggest that urban adolescents may tend to view community violence as an individual-level issue with individual gains.

In terms of themes shared across the benefits of and reasons for community violence, several emerged. For one, economic factors were identified as both benefits of and reasons for community violence. For students that said that obtaining money was a positive outcome for violence, they all qualified that this outcome was positive in the context of personal need.

Similarly, students identified needing money as a reason for violence. Thus, adolescents in low-income urban areas may view cycles of community violence as being inextricably linked to cycles of poverty. Moreover, students asserted that violence has the potential to bring people together, but collective action can also take the form of gang membership. In sum, our findings suggest that urban low-income youth have a complex, sophisticated, and nuanced understanding of community violence. Further research should explore factors that mediate the relation between community violence and the kinds of positive benefits that adolescents named. Furthermore, many students viewed violence as wrong, and for the students who do see violence as having positive outcomes, the outcomes were never in the service of aggression or antisocial in nature. This finding highlights the need for more work focusing not only on the *content*, but the *context* of urban low-income adolescents' attitudes about violence.

This study has several strengths. For one, the study benefits from the use of a large at-risk sample of urban adolescents with a high representation of students identifying as Latino. This study also uses both quantitative and qualitative data and examined relations between CVE and attitudes about violence both cross-sectionally and longitudinally. In addition, this study is one of the few to examine the influence of parent-child cohesion on the relation between CVE and attitudes about violence, and to examine mother-child cohesion and father-child cohesion separately. Finally, this study contributes to the body of evidence that CVE impacts youth psychologically, and that in certain instances parent-child cohesion may not be sufficient to mitigate the effects of CVE on outcomes.

Though the current study has many strengths, there are several limitations to highlight. Most of our analyses were cross-sectional, and thus conclusions about causality cannot be made. In addition, our CVE measure did not indicate exactly when CVE occurred, and was based on

students' retrospective accounts of CVE, which may be susceptible to bias. Daily diary accounts may be one important method for getting the most accurate reporting of CVE for future studies. As all predictors and outcomes were child-reported, estimates might be inflated by the shared informant variance. Furthermore, as this study was carried out in two Midwestern high schools with high proportions of students identifying as Latino, future studies should test whether these results generalize to other geographical and cultural contexts. It is also unknown whether the students who participated in Wave 2 differed in their community violence exposure and attitudes towards guns from the students who did not. Future studies might also examine 'primary' and 'alternate' caregivers to be more inclusive of different family structures and not as reliant on gender binaries. Lastly, as this study examined attitudes, we do not know how predictive these attitudes might be of behavior. Extending these findings to include behavioral outcomes could be an important subsequent line of research, as well as work examining other factors that may moderate the associations between CVE and attitudes towards violence.

Expanding access to counseling services in high schools that serve low-income urban adolescents of color may be an important way to disrupt the cycles of violence that plague certain communities. Moreover, as our results suggest adolescents may view violence as acceptable in the context of economic deprivation, public programs that ensure that families living in poverty have access to housing, food, and other resources may be another important tool for addressing community violence. In terms of clinical implications, psychological services for youth exposed to community violence might focus specifically on challenging and reframing some of the attitudes that may stem from community violence exposure. Moreover, clinicians working with Latino youth specifically may incorporate cultural constructs like *familismo* to make services more culturally relevant.

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Table 15: Descriptive Statistics and Frequencies of Demographic and Study Variables

Variable	Wave 1	Wave 2	Range
Age			
Mean Adolescent Age in Years (SD)	15.56(1.03)	16.57(1.03)	13-20
Gender			
Male (n)	247	197	
Female (n)	290	240	
Ethnicity			
Latino (n)	416	335	
African American (n)	92	76	
Asian-American (n)	16	16	
Other (n)	10	8	
European-American (n)	2	1	
Multiracial (n)	1	1	
School			
Chicago high school (n)	333	288	
Detroit high school (n)	204	149	
Gang- affiliated Peers			
No (n)	401	346	
Yes (n)	120	87	
Community Violence Exposure			
Mean Past Year Witnessing (SD)	17.96(18.64)	16.56(17.33)	0-91
Mean Past Year Personal Victimization (SD)	5.67(10.60)	5.48(10.14)	0-63
Parent-child cohesion			
Mean Mother-child cohesion (SD)	35.05(8.02)	34.18(7.76)	10-50
Mean Father-child cohesion (SD)	31.16(9.07)	30.59(9.03)	10-50
Attitudes about Violence			
Mean Attitudes about Guns & Violence (SD)	7.62(4.45)	10.64(4.59)	0-26

Note. Wave 1 N= 537, Wave 2 N= 437

Table 16: Response Frequencies for Attitudes about Guns and Violence Items

Item	% Agree (n)	
	Wave 1	Wave 2
I wish there weren't any guns in my neighborhood. (R)	17.5% (94)	19.9% (86)
Most people feel nervous around someone with a gun and they want to get away from that person. (R)	21.0% (113)	23.9% (103)
The people I respect would never go around with a gun because they're against hurting people. (R)	20.9% (112)	26.2% (113)
I don't like people who have guns because they might kill someone. (R)	28.1% (151)	29.3% (126)
I wish everyone would get rid of all their guns. (R)	17.3% (93)	20.3% (87)
I don't like being around people with guns, because someone could end up getting hurt. (R)	18.8% (101)	21.7% (93)
I'd like to have a gun so that people would look up to me.	4.1% (22)	5.8% (25)
It would be exciting to hold a loaded gun in my hand	9.7% (52)	11.4% (49)
I bet it would feel real cool to walk down the street with a gun in my pocket.	3.5% (19)	5.1% (22)
It would make me feel really powerful to hold a loaded gun in my hand.	8.9% (48)	9.1% (39)
I think it would be fun to play around with a real gun.	6.5% (35)	7.0% (30)
Carrying a gun makes people feel safe.	21.4% (115)	22.9% (99)
Carrying a gun makes people feel powerful and strong.	31.3% (168)	38.7% (167)

Note. N= 537 (Wave1); N=437 (Wave 2); (R) = reverse-coded item; percentages for reverse-coded items reflect percentage of participants who responded, 'Disagree' to statement

Table 17: Correlations Between Study Variables and Covariates

Variable	1	2	3	4	5	6	7	8	9	10	11
1. CVE Past Year Witnessing Wave 1	-										
2. CVE Past Year Personal Victimization Wave 1	**.76****	-									
3. Attitudes about Guns & Violence Wave 1	**.27****	**.32****	-								
4. Attitudes about Guns & Violence Wave 2	**.22****	**.30****	**.50****								
5. Mother-Child Cohesion	**-.19****	**-.15****	**-.16****	**-.13***	-						
6. Father-Child Cohesion	**-.09***	-.05	-.02	-.08	**.42****	-					
7. Age	.01	.05	.07	**.14****	-.04	-.02	-				
8. Gender	-.08	**-.18****	**-.26****	**-.27****	.08	**-.11***	-.06	-			
9. Ethnicity (Latino vs. Others)	-.08	**-.15****	-.07	-.03	-.03	.04	-.07	-.04	-		
10. School	-.04	**-.20****	-.05	-.02	.03	.00	-.01	-.001	**.33****	-	
11. Gang-affiliated peers	**.41****	**.35****	**.26****	**.14****	**-.14****	-.04	.001	-.05	-.08	**-.19****	-

Note. $^{*}p < .05$, $^{**}p < .01$.

Table 18: Hierarchical Regression Analysis of Witnessing on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.17	.18	.04	.94	.35	.13	
Gender	**-2.14**	**.38**	**-.24**	**-5.70**	**.00****		
Ethnicity (Latino vs. Others)	-.63	.48	-.06	-1.31	.19		
School	.26	.41	.03	.63	.53		
Gang-affiliated peers	**2.64**	**.45**	**.25**	**5.89**	**.00****		
STEP 2							
Age	.17	.18	.04	.95	.34	.16	.03
Gender	**-2.04**	**.37**	**-.23**	**-5.50**	**.00****		
Ethnicity (Latino vs. Others)	-.50	.48	-.05	-1.05	.29		
School	.18	.40	.02	.44	.66		
Gang-affiliated peers	**1.91**	**.48**	**.18**	**3.95**	**.00****		
Past Year CVE Witnessing	**.04**	**.01**	**.17**	**3.73**	**.00****		

Note. $^{*}p < .05$, $^{**}p < .01$.

Table 19: Hierarchical Regression Analysis of Personal Victimization on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.16	.18	.04	.91	.37	.13	
Gender	**-2.11**	**.38**	**-.24**	**-5.62**	**.00****		
Ethnicity (Latino vs. Others)	-.64	.48	-.06	-1.33	.18		
School	.25	.41	.03	.62	.54		
Gang-affiliated peers	**2.63**	**.45**	**.25**	**5.85**	**.00****		
STEP 2							
Age	.13	.18	.03	.75	.46	.17	.04
Gender	**-1.77**	**.37**	**-.20**	**-4.75**	**.00****		
Ethnicity (Latino vs. Others)	-.40	.47	-.04	-.85	.40		
School	.49	.40	.05	1.23	.22		
Gang-affiliated peers	**1.90**	**.46**	**.18**	**4.10**	**.00****		
Past Year CVE Personal Victimization	**.09**	**.02**	**.22**	**4.94**	**.00****		

Note. *$p < .05$, **$p < .01$.

Table 20:Hierarchical Longitudinal Regression Analysis of Witnessing on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.36	.20	.08	1.82	.07	.28	
Gender	**-1.55**	**.41**	**-.17**	**-3.74**	**.00****		
Ethnicity (Latino vs. Others)	-.01	.51	-.001	-.02	.98		
School	-.22	.44	-.02	-.50	.62		
Gang-affiliated peers	.36	.50	.03	.72	.47		
Attitudes about guns and violence wave 1	**.47**	**.05**	**.45**	**9.87**	**.00****		
STEP 2							
Age	.36	.20	.08	1.83	.07	.29	.01
Gender	**-1.52**	**.41**	**-.16**	**-3.69**	**.00****		
Ethnicity (Latino vs. Others)	.03	.51	.002	.06	.96		
School	-.25	.44	-.03	-.56	.57		
Gang-affiliated peers	-.01	.53	-.001	-.01	.99		
Attitudes about guns and violence wave 1	**.45**	**.05**	**.43**	**9.41**	**.00****		
Past Year CVE Witnessing wave 1	.02	.01	.09	1.93	.06		

Note. *p < .05, **p < .01.

Table 21: Hierarchical Longitudinal Regression Analysis of Personal Victimization on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.36	.20	.08	1.82	.07	.28	
Gender	**-1.55**	**.42**	**-.17**	**-3.74**	**.00****		
Ethnicity (Latino vs. Others)	-.01	.51	-.001	-.02	.98		
School	-.22	.44	-.02	-.49	.63		
Gang-affiliated peers	.36	.50	.03	.72	.47		
Attitudes about guns and violence wave 1	**.47**	**.05**	**.45**	**9.86**	**.00****		
STEP 2							
Age	.35	.20	.08	1.78	.08	.28	.00
Gender	**-1.49**	**.42**	**-.16**	**-3.55**	**.00****		
Ethnicity (Latino vs. Others)	.02	.51	.002	.04	.97		
School	-.15	.45	-.02	-.34	.73		
Gang-affiliated peers	.22	.51	.02	.43	.67		
Attitudes about guns and violence wave 1	**.46**	**.05**	**.44**	**9.37**	**.00****		
Past Year CVE Personal Victimization wave 1	.02	.02	.05	1.05	.29		

Note. $^{*}p < .05$, $^{**}p < .01$.

Table 22: Hierarchical Regression Analysis of Witnessing Violence and Mother-Child Cohesion on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.17	.18	.04	.93	.35	.13	
Gender	**-2.11**	**.38**	**-.24**	**-5.62**	**.00****		
Ethnicity (Latino vs. Others)	-.60	.48	-.06	-1.24	.21		
School	.27	.41	.03	.66	.51		
Gang-affiliated peers	**2.66**	**.45**	**.25**	**5.92**	**.00****		
STEP 2							
Age	.16	.18	.04	.92	.36	.16	.03
Gender	**-1.98**	**.37**	**-.22**	**-5.31**	**.00****		
Ethnicity (Latino vs. Others)	-.50	.48	-.05	-1.05	.29		
School	.21	.40	.02	.52	.60		
Gang-affiliated peers	**1.88**	**.49**	.18	**3.86**	**.00****		
Past Year CVE Witnessing	**.04**	**.01**	**.16**	**3.37**	**.00****		
Mother- Child Cohesion	-.04	.02	-.08	-1.86	.06		
STEP 3							
Age	.15	.18	.04	.83	.41	.16	.00
Gender	**-1.95**	**.37**	**-.22**	**-5.23**	**.00****		
Ethnicity (Latino vs. Others)	-.48	.48	-.04	-1.01	.31		
School	.21	.40	.02	.53	.60		
Gang-affiliated peers	**1.85**	**.49**	**.18**	**3.81**	**.00****		
Past Year CVE Witnessing	**.04**	**.01**	**.17**	**3.45**	**.00****		
Mother- Child Cohesion	-.04	.02	-.08	-1.84	.07		
Past Year CVE Witnessing x Mother- Child Cohesion	.001	.001	.04	.86	.39		

Note. $^{*}p < .05$, $^{**}p < .01$.

Table 23: Hierarchical Regression Analysis of Witnessing Violence and Father-Child Cohesion on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.19	.18	.04	1.02	.31	.14	
Gender	**-2.22**	**.38**	**-.25**	**-5.83**	**.00****		
Ethnicity (Latino vs. Others)	-.68	.49	-.06	-1.39	.16		
School	.20	.41	.02	.49	.63		
Gang-affiliated peers	**2.63**	**.45**	**.25**	**5.80**	**.00****		
STEP 2							
Age	.19	.18	.04	1.03	.30	.16	.02
Gender	**-2.15**	**.38**	**-.24**	**-5.65**	**.00****		
Ethnicity (Latino vs. Others)	-.57	.48	-.05	-1.18	.24		
School	.13	.41	.01	.31	.76		
Gang-affiliated peers	**1.90**	**.49**	**.18**	**3.88**	**.00****		
Past Year CVE Witnessing	**.04**	**.01**	**.17**	**3.59**	**.00****		
Father- Child Cohesion	-.01	.02	-.02	-.35	.72		
STEP 3							
Age	.19	.18	.04	1.03	.31	.16	.00
Gender	**-2.17**	**.38**	**-.24**	**-5.68**	**.00****		
Ethnicity (Latino vs. Others)	-.58	.48	-.05	-1.20	.23		
School	.13	.41	.01	.31	.76		
Gang-affiliated peers	**1.91**	**.49**	**.18**	**3.89**	**.00****		
Past Year CVE Witnessing	**.04**	**.01**	**.16**	**3.55**	**.00****		
Father- Child Cohesion	-.01	.02	-.02	-.39	.70		
Past Year CVE Witnessing x Father- Child Cohesion	-.001	.001	-.03	-.76	.45		

Note. $^{*}p < .05$, $^{**}p < .01$

Table 24: Hierarchical Regression Analysis of Personal Victimization and Mother-Child Cohesion on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.16	.18	.04	.90	.37	.13	
Gender	**-2.09**	**.38**	**-.23**	**-5.53**	**.00****		
Ethnicity (Latino vs. Others)	-.61	.48	-.06	-1.27	.21		
School	.26	.41	.03	.65	.52		
Gang-affiliated peers	**2.65**	**.45**	**.25**	**5.87**	**.00****		
STEP 2							
Age	.13	.18	.03	.72	.47	.18	.05
Gender	**-1.72**	**.37**	**-.19**	**-4.59**	**.00****		
Ethnicity (Latino vs. Others)	-.41	.47	-.04	-.88	.38		
School	.50	.40	.06	1.26	.21		
Gang-affiliated peers	**1.82**	**.47**	**.17**	**3.90**	**.00****		
Past Year CVE Personal Victimization	**.09**	**.02**	**.21**	**4.67**	**.00****		
Mother- Child Cohesion	**-.05**	**.02**	**-.09**	**-2.04**	**.04***		
STEP 3							
Age	.12	.18	.03	.70	.48	.18	.00
Gender	**-1.67**	**.37**	**-.19**	**-4.47**	**.00****		
Ethnicity (Latino vs. Others)	-.35	.47	-.03	-.75	.45		
School	.52	.40	.06	1.30	.19		
Gang-affiliated peers	**1.82**	**.47**	**.17**	**3.92**	**.00****		
Past Year CVE Personal Victimization	**.10**	**.02**	**.24**	**5.12**	**.00****		
Mother- Child Cohesion	-.04	.02	-.08	-1.83	.07		
Past Year CVE Personal Victimization x Mother- Child Cohesion	**.01**	**.003**	**.09**	**2.20**	**.03***		

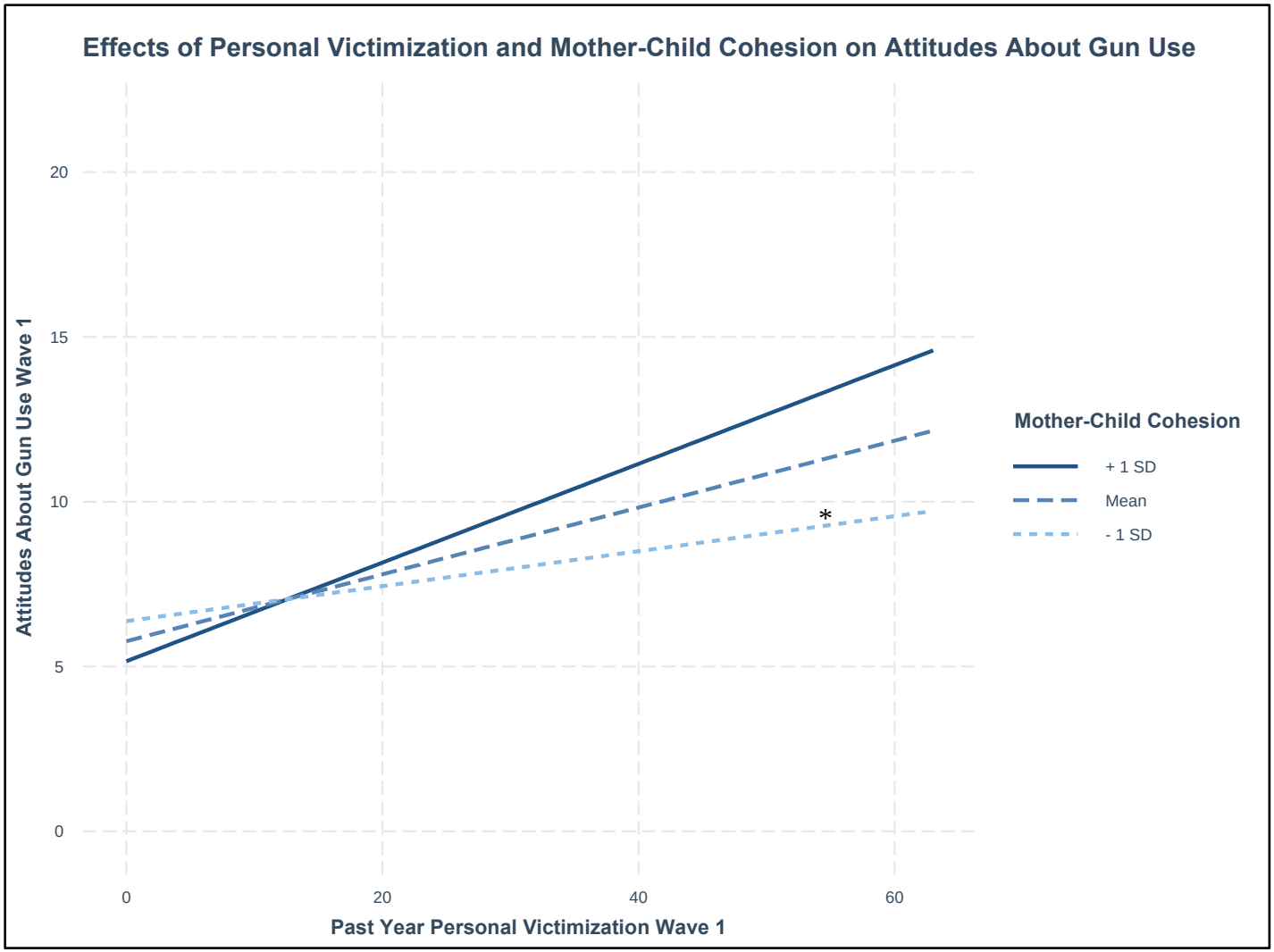
Note. $^{*}p < .05$, $^{**}p < .01$.

Table 25: Hierarchical Regression Analysis of Personal Victimization and Father-Child Cohesion on Attitudes about Guns and Violence

	B	SE	**β**	*t*	*p*	R^2	ΔR^2
STEP 1							
Age	.18	.18	.04	.99	.32	.14	
Gender	**-2.19**	**.38**	**-.24**	**-5.74**	**.00****		
Ethnicity (Latino vs. Others)	-.69	.49	-.06	-1.41	.16		
School	.20	.41	.02	.48	.63		
Gang-affiliated peers	**2.62**	**.46**	**.25**	**5.75**	**.00****		
STEP 2							
Age	.15	.18	.03	.83	.41	.17	.03
Gender	**-1.89**	**.38**	**-.21**	**-4.95**	**.00****		
Ethnicity (Latino vs. Others)	-.47	.48	-.04	-.99	.33		
School	.43	.41	.05	1.01	.29		
Gang-affiliated peers	**1.89**	**.47**	**.18**	**4.02**	**.00****		
Past Year CVE Personal Victimization	**.09**	**.02**	**.22**	**4.76**	**.00****		
Father- Child Cohesion	-.01	.02	-.02	-.50	.61		
STEP 3							
Age	.15	.18	.03	.83	.41	.18	.01
Gender	**-1.88**	**.38**	**-.21**	**-4.92**	**.00****		
Ethnicity (Latino vs. Others)	-.44	.48	-.04	-.91	.36		
School	.43	.41	.05	1.05	.30		
Gang-affiliated peers	**1.92**	**.47**	**.18**	**4.08**	**.00****		
Past Year CVE Personal Victimization	**.09**	**.02**	**.21**	**4.65**	**.00****		
Father- Child Cohesion	-.01	.02	-.01	-.27	.78		
Past Year CVE Personal Victimization x Father- Child Cohesion	.003	.003	.04	.95	.34		

Note. $^{*}p < .05$, $^{**}p < .01$.

Figure 9: Effects of Personal Victimization and Mother-Child Cohesion on Attitudes About Gun Use



Plot illustrating the interaction between personal victimization and mother-child cohesion in predicting attitudes about guns and violence. The continuous moderator (mother-child cohesion) has been plotted at +/- 1 standard deviation (SD) and mean intervals. A Johnson-Neyman interval shows that personal victimization and attitudes about guns and violence are significantly, positively correlated when mother-child cohesion is less than 16.65 (n= 74). The range of mother-child cohesion values (floored at zero) in the data are [0, 40]. This figure illustrates that as mother-child cohesion decreases, the relation between personal victimization and attitudes towards violence is weakened. Stars next to the lines indicate significant slopes, $^{*}p < .05$, $^{**}p < .01$.

Chapter 5: Dissertation Discussion

As discussed in the General Introduction, poverty is a serious public health problem that leaves families vulnerable to a myriad of risk, with a disproportionate impact on families of color (Bullock, 2008; Feagin, 2004; Lovell, 2008). To create interventions and policies aimed at reducing racial disparities and assisting families of color navigating the painful realities of poverty, it is important to examine how poverty-related stressors influence parents and children, as well as to explore mechanisms of resilience. Thus, the goal of the current dissertation was to explore how contextual sources of stress influence parenting in low-income largely African American and Latino families. The current dissertation also examined how parenting may serve as a protective factor for low-income African American and Latino adolescents exposed to community violence.

Study 1

The goal of Study 1 was to examine the extent to which the frequency and recency of IPV are associated with parenting stress and parenting behaviors in a large community sample of IPV-exposed low-income Latino and African American mothers of children aged 0-14 years (*N*=1159). Through the use of structural equation modeling, I found that both the frequency and recency of IPV exposure were associated with more negative and less positive parenting practices through increased parenting stress. However, a history of abuse did not appear to sensitize women to these effects, though it did appear to predict more stability in exposure to IPV and parenting stress. These results add to the literature by examining differences in parenting according to the timing of IPV exposure and the role parenting stress plays in this

process. Moreover, by using a well-sampled at-risk community sample, we were able to examine these questions among a broad range of survivors, not only among those who went to a shelter or were involved in justice/legal systems. To our knowledge, this is the first study of IPV and parenting to confirm measurement invariance across age and ethnicity, which allowed us to establish the validity of findings cross-culturally and across developmental periods. These results provide evidence that parenting stress is an important mechanism linking IPV to parenting outcomes and highlight that many mothers with a history of abuse show resilience in terms of maintaining a positive parenting environment.

Study 2

Though there is evidence that material hardship negatively impacts parenting in younger children (McConnell, Breitkreuz, & Savage, 2010, Slack et al., 2011), little is known about these processes as children reach adolescence and specific mechanisms that may buffer the association between material hardship and parenting. Thus, in the second study, I tested whether social support moderates the association between material hardship and parenting in a sample of 237 low-income families of adolescents. I found limited main effects of material hardship on parenting, and only one significant interaction between material hardship and social support. These results suggest that relations between material hardship and parenting may lessen as children age, and some evidence that low social support may be a risk factor for parents.

Study 3

Studies have shown that positive parenting moderates the associations between CVE and negative outcomes such as anxiety and violence perpetration (Brookmeyer, Henrich, & Schwab-Stone, 2005; Hardaway, McLoyd, & Wood, 2012), but no study has examined how a positive

parent-child relationship might buffer the effects of community violence exposure on children's attitudes about violence specifically. Thus, for the third study, I tested whether parent-child cohesion moderated the association between CVE and attitudes about violence- specifically, attitudes about guns and violence - in a sample of low-income urban adolescents of color. We found that CVE was associated with more favorable attitudes about violence, whereas mother-child cohesion was associated with less favorable attitudes. In contrast, we did not find any effects of father-child cohesion. There was some evidence that parent-child cohesion moderated the relation between CVE and attitudes about violence, though these findings were limited and not in the expected direction. There were also significant main effects of gender and gang-affiliated peers on attitudes towards guns and violence. Lastly, the qualitative data added descriptive depth and context to these findings. Our findings suggest that parent- child cohesion may sensitize adolescents to the impacts of community violence. Additionally, analysis of the qualitative data suggests that many adolescents do not see violence as a means to achieve positive outcomes, and that when they do perceive positive outcomes, said outcomes are not antisocial in nature.

Taken together, these three studies demonstrate that it is not just parents and children individually, but rather the parent-child *relationship* that is embedded within context. On the one hand, Studies 1 and 2 provide evidence that a parent's relational or economic context can be a determinant of parenting behaviors. Study 3, on the other hand, demonstrates that broader neighborhood contextual factors (i.e., presence of community violence) interact with parenting to predict child outcomes. The parent-child relationship is one best examined through a contextual lens, taking into account this interplay. These findings are strengthened by the use of multiple approaches and methods, which reflect the complexity of parenting in context. In study 1, I used

structural equation modeling to test relationships among the frequency and timing of IPV, parenting stress, and parenting outcomes among mothers with histories of IPV exposure both cross-sectionally and longitudinally, which allowed me to confirm the factor structure of the parenting stress and parenting constructs that I used. I also ran tests of measurement invariance to test whether parenting constructs were measured similarly across each racial/ethnic group and age of child (early childhood versus early adolescence) -- a key measurement issue often ignored in studies with heterogeneity in participant backgrounds. In study 2, I used observational measures of parenting, which can help to highlight those dynamics that the parent and/or child may not report, as well as dynamics that are difficult to capture in self-report measures, such as nonverbal behaviors, tone, and withdrawal (Gardner, 2000). And lastly, through the use of qualitative research, I was able to add descriptive depth and context to adolescent attitudes about guns and violence.

Challenges and Future Directions

The results of the three studies that comprise this dissertation reflect significant advances in the understanding of how poverty-related stressors impact parents and children. However, the results also highlight ongoing challenges in the field that should be addressed in future research.

Methods. One of the main methodological challenges is the reliance on questionnaire data. While cost-effective and reliable, there are several limitations about this method to highlight. For one, questionnaires vary greatly in their detail, the period surveyed, and the extent of supervision of respondents, all of which can impact responses. Furthermore, questionnaire responses depend on the perception, encoding, storage, and retrieval of information about experiences, mood, or beliefs; thus, answers depend on the subject's age and the context of questioning (Baranowski, 1988; Durante & Ainsworth, 1996). Some alternatives to retrospective

questionnaires include the use of ecological momentary assessment and daily diary studies (Shiffman, Stone, & Hufford, 2008). These techniques have the potential to add richness and accuracy to reporting of exposure to community violence, as well as IPV and experiences of hardship. Qualitative work is also useful in adding descriptive depth to the content of questionnaire data in that it does not rely on predetermined variables (Hill, 2005, Morrow, Rakhsha, & Castaneda, 2001). In study 3, I used a qualitative approach to add depth to findings around adolescent attitudes about violence. If available, qualitative approaches would have no doubt given context to understanding parental experiences of material hardship and social support in study 2 and explain unexpected findings, as well as allowed for more depth around cohesion.

Ethnicity. In future studies, researchers should continue to make tangible steps towards reframing the use and interpretation of ethnicity effects. One recommendation is to start by identifying ethnicity as a social construct that captures both cultural socialization and exposure to racism and interpret any observed ethnicity-associated differences through this contextual lens (Jones, 2001). Culture is inherently difficult to define due to its multifaceted nature (e.g., dimensions of collectivism and individualism within a group); therefore, researchers often have used demographic variables (race, ethnicity, language, national origin, socioeconomic status, etc.) as proxies for culture, leading to an overreliance on group comparisons. A limitation of all three studies is that there were no explicit measures of cultural values, though I did use a cultural lens to explain findings from Study 3. Including cultural measures developed from the population of interests in studies where ethnicity effects will be discussed may lead to a more nuanced and careful analysis of ethnicity effects (Betancourt & Flynn, 2009). A methodological approach called the "bottom-up approach," in which the population of interest itself is the source

for building a cultural measure, has been used in research on culture and health behaviors to identify socially shared beliefs, values, norms, and practices (Betancourt, Flynn, & Ormseth, 2011; Flynn, Betancourt, & Ormseth, 2011).

Transactional models. Bronfenbrenner's (1979) ecological model posits that individual development takes place within co-occurring mutually influencing levels of the environment (macrosystem/culture, exosystem/neighborhood, and microsystem/family. Thus, children affect their environments and environments affect children. Similarly, environmental settings affect and are affected by each other. Thus, it is important that research capture these complex mutual influences. Though each study from the current dissertation has merit, the underlying assumed causality was unidirectional in nature, an assumption to be addressed in future research. Cross-sectional studies may give misleading pictures of how risk and protective factors combine. For example, children living in households with IPV tend to demonstrate more behavioral problems (Renner & Boel-Studt, 2013), which may in turn elicit harsher care from parents and create additional stress that flows into the intimate relationship (Jouriles, Rosenfield, McDonald, Vu, Rancher, & Mueller, 2018). To get evidence of this bidirectionality, there is a need for research that pays equal attention to the detail of each individual and setting and tests relationships over time. Moreover, nonexperimental approaches can only point to associations between risks and pathways, whereas intervention designs offer the ability to unravel the causal connections underlying both psychopathological and normative outcomes (Cicchetti & Hinshaw, 2002).

Implications

Theoretical Implications. The results have implications for the theoretical model proposed in the General Introduction in Chapter 1. In Study 1, I found evidence that parents' psychological resources are important in predicting parent behaviors in the context of stressors,

consistent with Belsky's (1984) model of parenting processes. Specifically, the relation between IPV and parenting was mediated almost entirely by parenting stress. In contrast, Study 2 did not examine the effects of material hardship on parent psychological resources. Incorporating parent psychological outcomes into the model might be an important future direction for this study. The proposed model also included the presence of contextual supports as a buffer on the relation between contextual stressors and parenting, as well as between contextual stressors and child characteristics. Study 2 found that reporting having high or average levels of belonging seemed to buffer the negative association between material hardship and positive parenting, though no other interactions were found. And interestingly, in Study 3, I found that mother-child cohesion *strengthened* the relation between community violence exposure and attitudes about violence. Thus, support for the proposed model was mixed. One aspect not explicitly included in the model was developmental stage. Study 2 was one of the first to examine material hardship in an exclusively adolescent sample. Thus, the proposed pathways may all be moderated by the child's developmental context. In addition, null findings about material hardship and childhood abuse both point towards resilience in these samples, which should be explored in further work.

Clinical Implications. Taken together, these studies offer specific targets of intervention for adults and adolescents coping with specific forms of adversity. Specifically, findings from Study 1 suggest that clinicians working with low-income mothers who are survivors of IPV may incorporate measures of parenting stress into their initial evaluations and consider the role parenting stress plays in parenting behaviors. Moreover, psychological interventions targeting parenting-related cognitions that may contribute to stress in IPV survivors- such as self-blame and perceived lack of self-efficacy- may be particularly promising for this group. A strong evidence base points towards positive effects of parenting programs on parenting effectiveness,

child behavior and family functioning (Barlow, Bergman, Kornør, Wei, & Bennett, 2016). Yet many of the empirically-supported interventions used to help low-income and ethnic minority parents were originally developed and tested on middle-income and non-Latino White samples (Coard et al. 2004; Forehand and Kotchick 1996; Gorman and Balter 1997). Research shows that economically disadvantaged families tend to receive less benefit from parent training than families from higher socioeconomic groups (Lundahl, Risser, & Lovejoy, 2006). To provide successful parenting support interventions additional attention may be needed to reduce logistical and psychological barriers which may relate to sociodemographic factors.

Though these findings were limited, there was partial evidence in Study 2 that social support buffers the relation between material hardship and parenting, suggesting that interventions focused on bolstering social support among parents experiencing material hardship may be a promising avenue of intervention. Social prescribing, also described as 'non-medical referral' or 'community referral', is a promising intervention linking socioeconomically disadvantaged parents with appropriate social, cultural and leisure activities in the community. For health professionals, social prescribing constitutes a practical tool to implement mental health promotion and avoid overt medicalization of problems, such as loneliness, social exclusion and lack of meaningful daily activities (Cawston, 2011).

And lastly, findings from Study 3 suggest that for adolescents coping with exposure to community violence, treatments that focus on challenging and reframing some of the attitudes about violence may prove useful in promoting more positive outcomes. Schools offer unique opportunities for enhancing mental health in many different ways. Mental health promotion in schools go under various different names such as 'social and emotional learning' (SEL), 'emotional literacy', 'emotional intelligence', 'resilience', 'life-skills' and 'character education'

and can encompass many different approaches (Weare, 2010). One approach that may be relevant to children's attitudes about violence is character education, which is the act of teaching students how to regulate feelings, thoughts, and actions into pro-social behaviors. The most commonly reported effects of character education are socio-moral cognition, pro-social behaviors and attitudes, problem-solving skills, reduced drug use, reduced violence/aggression, school behavior, knowledge and attitudes about risk, emotional competency, academic achievement, attachment to school and decreased general misbehavior (Berkowitz, Bier, & McCauley, 2017).

Taken together, these findings provide further evidence that poverty-related stressors impact the functioning of both parents and children. Apart from the individual treatment implications, these findings highlight the need for broad structural-level change aimed at improving the lives of families living in poverty and reducing racial disparities in health and wealth. This highlights the need for multi-method multiple approach studies that capture the nuances of cultural, social, and developmental context in parenting and poverty.

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