

Parenting Resilience in the Context of Homelessness: Risk and Protective Factors

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## Abstract

Homelessness among families with children has become a surprisingly common and persistent problem. Children who experience the disruptions of homelessness are at increased risk for difficulties with academic, social, emotional, and behavioral development. Decades of research on resilience suggests that effective parenting helps to mitigate the effects of adversity on child development. However, relatively little is known about factors that predict parenting quality during family homelessness. This study examined predictors of parenting quality among 138 families who were staying in three Minneapolis emergency housing shelters, with the goal of identifying distal and proximal influences on parenting in families facing homelessness. Based on transactional-ecological systems perspectives on the determinants of parenting, and research on risk and protective processes for parenting under stress, current parenting in a shelter context was expected to relate to recent and past adversity of the parent and current health and social resources. Current trauma, anxiety, and depressive symptoms in parents were expected to interfere with effective parenting. Two basic dimensions of parenting, warmth and structure, were expected to underlie observed parenting assessed by three empirically validated observational coding techniques. Factor analyses indicated two dimensions of parenting; however, these reflected a blend of warmth/structure and a distinct factor of negativity. Thus, subsequent analyses predicted parenting on each of two dimensions, using linear methods of path analysis and multiple regression to test for predictive, mediating, and moderating effects of earlier and recent adversity, physical and mental health, and available resources on parenting quality. Also tested was the

moderating influence of resources, specifically cognitive resources and social support, on the relationship between adversity, mental health, and parenting quality. Finally, a person-centered analytic approach was used to provide an integrated portrait of resilient parenting in the context of homelessness. Controlling for parent age, sex, and child behavior, parents' adverse experiences in childhood were positive related to warmth/structure, contrary to expectations, whereas current resources, as predicted, were positively and independently associated with this aspect of effective parenting. Resources did not moderate any of these relationships. Parents classified as showing resilience in the person-focused analyses had greater cognitive, social, and emotional resources than parents classified as maladaptive. Strengths and limitations of this study are discussed in relation to future research and the goals of identifying malleable protective influences on parenting for families in challenging situations.

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## **Parenting Resilience in the Context of Homelessness: Risk and Protective Factors**

Homelessness among families with children is an alarmingly common problem in the United States. In 2010, at least 1.6 million children experienced homelessness, representing a 38% increase since 2007 (National Center on Family Homelessness (NCFH), 2011). Data from the United States Department of Education indicate that during the 2011-2012 school year, over 1.1 million students were classified as homeless (National Center for Homeless Education (NCHE), 2014), an increase of more than 500,000 students since the 2004-2005 year (NCHE, 2005). This persistent and growing problem is of particular concern because homelessness appears to convey risk for difficulties in social, behavioral, and academic development for children (Cutuli et al., 2013; Miller 2011; National Research Council and Institute of Medicine [NRC], 2010; Samuels, Shinn, & Buckner, 2010).

Resilience research suggests that effective parenting plays an important role in protecting children from the negative impacts of adversity like homelessness (see Masten, 2014). Systems perspectives on parenting, and the determinants of parenting suggest that it is multiply determined, and influenced by factors including: parents' developmental history, contextual stress, available resources, and child characteristics (Abidin, 1992; Belskey, 1984). While a growing body of research provides insights into the processes and mechanisms by which family adversity disrupts the family system, and more specifically, undermines effective parenting, questions remain how these factors impact effective parenting during the unique challenge of family homelessness. This study was designed to examine effective parenting in the context of homelessness, as predicted by

parents' experience of historic adversity, current adversity, available resources, and mental health symptoms; as well as to provide an integrated portrait of resilient parenting. With an eye towards promoting resilience, this study was designed to serve as an early step in the process of identifying potential targets of intervention focused on prevention and intervention efforts for homeless families, targeted at the level of the parent.

### **Homelessness and Child Development**

Children who experience homelessness and high mobility develop in a context that falls at the high end of a continuum of risk. Homeless and highly mobile children (HHM), like many other children who experience poverty, frequently come from racial and/or ethnic minority backgrounds, experience poor living conditions and food insecurity, and are more likely to manifest physical and mental health problems than children who experience neither poverty nor residential instability (Masten et al., 1997; Rafferty, Shinn, & Weitzman, 2004; Samuels et al., 2010).

The potential impacts of homelessness and co-occurring poverty on the development of young children are substantial, and many argue that the high levels of cumulative risk pose very serious hazards for child development. Homeless and highly mobile children are more likely to experience frequent changes in living conditions, mid-year school changes, loss of personal possessions, family stressors, and loss of social support than children who are poor but stably housed. (Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Huntington, Buckner, & Bassuk, 2008; Masten et al., 1993; NRC, 2010; Rafferty & Shinn, 1991; Rumberger, 2003).

After accounting for poverty and other risk factors, substantial evidence suggests that children who experience homelessness and high mobility demonstrate significant and persistent deficits in academic achievement. Early work demonstrated significant associations between high mobility and lower levels of math and reading achievement throughout students' academic careers, even after controlling for socioeconomic status (SES; Ingersoll Sacmman, & Eckerling, 1989). Likewise, after controlling for a broad set of demographic risk factors, frequent residential moves has been associated with lower grades and an increased likelihood of grade retention (Adam & Chase-Lansdale, 2002; Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993).

Studies more specifically focused on homelessness (as opposed to residential stability) have found similar, albeit less consistent results (cf. Buckner, Bassuk, & Weinreb, 2001). Compared to stably housed children, children classified as homeless have been found to have lower levels of achievement in math, spelling and reading (Rubin et al., 1996; San Agustin et al., 1999). More recently, Obradovic and colleagues (2009) found that children identified as HHM had lower levels of initial academic achievement in grades 2 through 5 than students eligible for the National School Lunch Program who were not identified as HHM. Research utilizing a subsequent set of administrative data from the same large urban school district indicated that students identified as HHM showed significantly lower levels of literacy achievement in first grade than children who qualified for free lunch, and their high risk status predicted differential later levels and growth in math and reading achievement from third through eighth grade (Herbers et al., 2012). Additional analyses found lower achievement in math

and reading during years in which students were identified as HHM, and a slow down in growth for math achievement in the years following identification as HHM; these results suggest chronic and acute learning issues among students from HHM families compared with their more residentially stable peers (Cutuli et al., 2013).

Beyond the classroom, evidence indicates differences in mental health, and behavioral functioning between HHM children and children who are neither poor nor highly mobile, with somewhat less consistent differences found between HHM children and poor but stable housed children. A recent literature review found higher levels of parent reported and child reported internalizing and externalizing problems among homeless children (Buckner, 2008). Furthermore, slightly more than half of all studies that included a comparison group found that homeless children have significantly greater mental health and behavioral difficulties than their poor but stably housed peers (cf. Masten, Miliotis, Graham-Bermann, Ramirez, & Neeman, 1993; Zeisner, Marcoux, & Freeman, 1994; Buckner & Bassuk, 1997).

### **Ecological-Transactional Systems**

Bronfenbrenner (1979) proposed that individuals develop at the center of environmental systems comprised of multiple nested levels. Most distal from the individual are the macro- and exosystems, which contain broader cultural beliefs and features of the communities in which children develop, respectively. Most proximal to the individual is the microsystem, which contains aspects of an individual's developmental context with which they are in direct contact, and between the microsystem and the exosystem is the mesosystem, which consists of interactions

between two or more aspects of an individual's microsystem. According to ecological-transactional systems model (Cicchetti & Lynch, 1993), at the center of this system is the level of ontogenic development, which consists an individual and his or her adaptations. Furthermore, each level of the system has varying degrees of influence on the ontogenic level, and each of these nested levels are in constant interaction with one another (Cicchetti & Lynch, 1993; Lynch & Cicchetti, 1998).

At each level of the system are factors that convey or protect against risk. Those factors that are closest in proximity to an individual and longest lasting have the most significant impact on development and adaptation, whereas those factors that are most distal and most transient have the fewest long-term developmental effects (Cicchetti & Lynch, 1993; Cicchetti & Lynch, 1998; Cicchetti & Rizley, 1981). Furthermore, risk and protective factors at each level of this larger system can interact with one another, in addition to imparting direct effects. Thus, it is the cumulative impact of these factors at all levels of the system that determine an individual's competence and resilience (Lynch & Cicchetti, 1998; Masten, 2001; Masten, 2014).

In the context of emergency housing, disruptions occur at multiple system levels. As reviewed above, for children, the disruptions of homelessness can result in difficulties in multiple domains of functioning through direct and indirect effects. In addition, parents, who are typically an integral part of their children's microsystems also experience system wide disruptions, which impact their own adaptation and functioning. Factors at multiple levels of parents' environmental systems can significantly disrupt parenting behaviors. As one of the most proximal and enduring factors that influences

children's functioning and adaptation, the potential impacts of homelessness on effective parenting has significant implications for children's adaptation, and points to uniquely important role parents play during times of significant challenge.

### **Parenting and Resilience**

Decades of resilience research indicates that parents play an important role in protecting children from the negative effects of adversity. Early research on resilience found that having a close relationship with at least one competent parent provides protective effects from a host of significant challenges (e.g., Garmezy, 1974; Rutter, 1979; Werner & Smith, 1977). More contemporary resilience researchers suggest that positive parenting is one of the most robust predictors of resilience in the face of adversity (see Luthar, 2006; Masten, 2001; Masten, 2007).

Findings from the field of attachment research suggest that a parent's sensitive responsiveness to their child's signals and emotionally supportive caregiving are key aspects of parent behavior that shape the parent-child relationship (Ainsworth, Blehar, Waters, & Wall, 1978; De Wolff & van IJzendoorn, 1997; Sroufe, 1997). From this relationship children learn the extent to which they can rely on their caregivers to meet their needs and provide them with a safe a secure base from which to explore their environment (Sroufe & Fleeson, 1986). Based on these internalized expectations as well as other experiences with parents, children build an internal working model, or schema, that strongly influences the formation of future relationships (Bowlby, 1980, 1985; Bretherton, 1985, 1990; Main, Kaplan, & Cassidy, 1985).

Attachment processes strongly influence interpersonal relationships and the capacity to utilize available resources across the lifespan (See Bowlby, 1988; Sroufe, 1997). Children who experience a positive relationship with at least one caregiver, are better able to take advantage of interpersonal relationships in the future (Conger, Cui, Bryant, & Elder, 2000; Shonkoff & Phillips, 2000; Yates et al., 2003). Thus, from an attachment perspective, effective parenting in infancy and childhood sets the stage for individuals' future social relationships.

A limited body of work has examined the contributions that parenting makes to resilience for children experiencing homelessness and high mobility. In the most notable study, Miliotis and colleagues (1993) found that close parent-child relationships and high parental involvement were associated with academic and behavioral success at school. Similarly, data indicate that high-quality parenting is predictive of homeless student's academic success, and that parenting quality moderates the impact of risk on homeless children's school success (Herbers et al., 2011). Additional work by Herbers and colleagues (2014) with the sample used in the present study, found that responsive parenting is predictive of children's executive functioning and intellectual abilities, as well as for their peer acceptance at school.

### **Defining Effective Parenting**

Some of the most widely supported ideas about what constitutes effective parenting come from attachment theory. According to this theory, parent behavior in response to infant bids is an evolutionary necessity for infant survival (Bowlby, 1969/1982). Over time and through countless interactions with his or her caregiver, an

infant develops a mental representation of this key relationship, which in turn serves as the lens through which future social interactions are viewed (Bowlby, 1969/1982; 1973; Sroufe, 1996). Central to this relationship in infancy and throughout development is parent sensitivity and responsiveness towards their offspring (Ainsworth et al., 1978; Bowlby, 1969/1982; 1973; Sroufe, 1996).

Though coming from a distinct but related theoretical tradition, Baumrind (1973) and later scholars have found robust support for the importance of parent responsiveness towards their children, as well as for the importance of parents' expectations for mature and responsible behavior from children (demandingness). Later research built from these ideas has provided strong support for the importance of parent responsiveness and how well parents establish structured expectations for child behavior and follow through with those expectations (Herbers, 2011; Sroufe, Egeland, Carlson, & Collins, 2005; Caspi et al., 2004).

The Social Interaction Learning model (SIL) conceptualizes competent parenting from a somewhat different, but complementary perspective. According to this conceptualization, when parents respond to their children's bids with strategies based in coercion, children will escalate negative behaviors in both frequency and intensity. Often, parents will relent in the face of their child's negative behavior, thereby reinforcing it. If parents respond in kind with escalating hostility and coercion, children learn to model these strategies (Forgatch & Patterson, 2010; Forgatch & DeGarmo, 1999; Granic & Patterson, 2006; Patterson et al., 1989; Patterson, 2005a, 2005b). Effective parenting from the SIL perspective is encompassed by high levels of positive parenting behaviors

including effective discipline, monitoring, positive involvement, skill encouragement, and problem solving, and low levels of negative reciprocity, escalation, and negative reinforcement (Forgatch, Bullock, & Patterson, 2004; Forgatch & DeGarmo, 2002; Gewirtz et al., 2008).

### **Determinants of Parenting**

As previously mentioned, parents are one of the most proximal and enduring factors in their children's environmental systems, while also being at the center of their own distinct, but overlapping, multilevel environmental systems. Thus, given the important role that parents play in shaping their children's experiences of adversity, and the ways in which adversity often undermines parenting, it is important to examine those factors that are most likely to influence parents abilities to parent effectively. Through an understanding of the factors contributing to parenting in the same context, it may be possible to examine potential entry points for targeted prevention and intervention efforts for children and families who experience homelessness.

Nearly 30 years ago Belsky (1984) observed that developmental scientists had uncovered a great deal about how parenting and parent behaviors shape the socialization of children but had failed to ask the fundamental question, "why do parents parent the way they do?" (Belsky, 2011, p. 61). Belsky (1984) proposed a model, informed by Bronfenbrenner's (1979) ecological systems theory, in which parent functioning is multiply determined, and is largely shaped by a parent's developmental history and psychological resources, child characteristics, and the sources of stress and support in the

larger context. This model was later extended to include factors like parents' belief systems and personalities as contributors to parenting behavior (Abidin, 1992).

**Developmental History.** Parents' developmental histories have a significant impact on parenting behavior. Evidence from studies of the intergenerational transmission of parenting behavior seem to suggest that the parenting children receive is associated with the parenting they provide to their own children (Belsky & Jaffee, 2006). This pattern is widely supported in the literature on attachment, with a multitude of findings indicating that parents' attachment representations, which are based on their own childhood caregiving experiences, are predictive of the way they will interact with their children. Parents with more secure attachment representations tend to be more sensitive to their own children, encourage child learning, and demonstrate flexible responsiveness (Aviezer, Sagi, Joels, & Ziv, 1999; Crowell & Feldman, 1988; George & Solomon, 1996; Haft & Slade, 1989; van IJzendoorn, 1992; Ward & Carlson, 1995). Data suggest that parents with less secure representations are apt to be less supportive and colder during interactions with their children, and in some cases may demonstrate inconsistent parenting ranging from warm and responsive to controlling and insensitive (Cromwell & Feldman, 1988, 1989; Haft & Slade, 1989; van IJzendoorn, 1992; Ward & Carlson, 1995).

Data from the study of intergenerational transmission of maltreatment suggest that adversity experienced in childhood can have significant impacts on later parenting behavior. Though by no means a deterministic pathway, significant evidence suggests that a portion of individuals who experience maltreatment as children go on to perpetrate

maltreatment (e.g., Egeland, Jacobvitz, & Papatola, 1987; Newcombe & Locke, 2001; Pears & Capaldi, 2001; Merrick, Leeb, & Lee, 2013). Furthermore, using a person-oriented approach, McCullough and colleagues (2014) found that parents with the lowest levels of positive parenting and the highest levels of negative parenting reported the highest levels of emotional abuse in childhood.

Beyond the literature of attachment and maltreatment, significant evidence also suggest that the experience of adversity in childhood impacts parenting behavior. In a study of single mother African American families, Taylor and colleagues (2010) found that mothers' endorsements of more adverse events in childhood was significantly negatively related to parental warmth, and was negatively associated with effective management of child behaviors at the level of a trend. Parents classified as negligent were found to be more likely to report specific childhood events, including placement in foster homes and experiences of violence (Ethier, Lacharite, & Couture, 1995).

**Contextual Stress.** Though no clear definition of stress has emerged in the literature on parenting, one of the most common metrics of stress is economic hardship, and studies using this metric have provided strong support for its importance in parenting. Numerous studies of Iowa farm families suggest that having an unfavorable ratio of income to needs results in increased levels of parent hostility towards children and poor parenting practices (e.g., Conger, Lorenz, Elder, Melby, Simons, & Conger, 1991; Elder, Conger, Foster, & Ardel, 1992). Similar work in Finland found direct and indirect relationships between the pressures of economic hardship and negative parenting practices (Leinonen, Solantaus, & Punamaki, 2002).

Similarly, research conceptualizing stress as adverse life events indicates direct and indirect effects on parenting behaviors. Several studies report that high levels of parent stress are related to inconsistent discipline, lower levels of parent warmth, and higher levels of parent unresponsiveness to children (Belsky, 1984; Lempers, Clark-Lempers, & Simions, 1989). Furthermore, adverse experiences seem to be related to decreases in parent nurturing behavior and increases in coercive parent-child interactions (Belle, 1980; Patterson, 1983). Similar results are found when stress that is specific to parenting hassles are studied (Crnic & Greenberg, 1990; Crnic & Low, 2002; Rodgers, 1993). Additionally, a number of studies indicate that this relationship persists in multiple ecologically valid contexts (Belsky, Woodworth, and Crnic, 1996a; 1996b; Crnic and Spritz, 1997; Jain, Belsky, and Crnic, 1996; Pett, Vaughncole, and Wampold, 1994).

**Parent Mental Health.** Although not entirely consistent, evidence suggests that parent's mental health is also associated with parenting behaviors. The most compelling findings come from investigations of the impact of maternal depression on parenting behavior. Researchers have found that depressed mothers tend to be less responsive to their children's behaviors, have fewer positive interactions with their children, tend to demonstrate less effective communication strategies, and engage in less effective strategies to manage child behaviors (Cohn, Campbell, Matias, & Hopkins, 1990; Field, Healy, Goldstein, & Guthertz, 1990; Goodman & Brumley, 1990; Kelley & Jennings, 2003; Lovejoy, 1991; Kochanska, Kuczynski, Radke-Yarrow, & Welsh, 1987; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). In a meta-analysis of observational studies, Lovejoy and colleagues (2000) found a moderate association between maternal depression and

negative parenting behaviors. Furthermore, small to moderate relationships between maternal depression and disengaged behavior, and small effects for impacts on positive parenting behaviors were found. Interestingly, the only study found that examined the relationship between parent mental health and observed parenting behaviors among homeless families did not find a significant relationship between the two (Gewirtz, DeGarmo, Plowman, August, & Realmuto, 2009), suggesting this is an important area for further investigation.

### **Resources.**

*Parent Personality.* Parent personality characteristics have also been found to significantly contribute to parenting behaviors. Based in five-factor model of personality, openness to experience has been associated with higher levels of positive parenting, warmth, and structure (Belsky & Jaffee, 2006; Losoya, Callor, Rowe, & Goldsmith, 1997; Prinzie, Stams, Dekovic, Reijntjes, & Belsky, 2009). Likewise, lower levels of openness to experience have been associated with more overprotective parenting (Spinath & O'Connor, 2003).

Conscientiousness has been associated with warmth and structured parenting (Prinzie et al., 2009) and lower levels of negative and controlling parent behavior (Clark, Kohanska, & Ready, 2000; Losoya et al, 1997). Parents high in extraversion tend to express higher levels of positive emotion towards their children, tend to sensitive to their children's needs, and tend to engage in more cognitively stimulating with their children (Beslky, Crnic, & Woodsworth, 1995; Levy-Shiff, & Israelashivilli, 1988; Mangelsdorf, Gunnar, Kestenbaum, Lang, & Andreas, 1990). Furthermore, higher levels of

extraversion have been associated with higher levels of warmth and structure (Prinzle et al., 2009).

Extant studies suggest that parent agreeableness is significantly related to parent positivity and sensitivity, and is negatively associated with parent negativity and overcontrolling behavior (Belsky et al., 1995). Additionally, parent agreeableness has been positively associated with parent warmth, structure, and behavior that is supportive of children's autonomy, and has been associated with lower levels of power-assertive and negatively controlling behaviors (Belsky et al., 1995; Kochanska et al., 2003; Kochanska, Clark, & Goldman, 1997; Losoya et al., 1997; Prinzle et al., 2009).

Neuroticism and its facets have been associated with lower levels of parent involvement, parenting that is classified as more negative and intrusive, and parents high in neuroticism tend to endorse strongly authoritarian parenting values (Belsky & Jaffee, 2006; Conger, McCarthy, Yang, Lakey, & Kropp, 1984; Kochanska, Aksan, & Nichols, 2003). Likewise, higher levels of parent neuroticism are associated with lower levels of warmth and structure, as well as with lower levels of autonomy supportive parent behaviors (Prinzle, et al., 2009).

***Social Support.*** The availability of social support to parents is also an important contributor to parent behaviors. In a meta-analysis, Andresen & Telleen (1992) found moderate effect sizes for the relationships between emotional support and positive parenting, and between material support and positive parenting. In research with high-risk families, social support networks were associated with parent responsiveness, engagement, and parent-child play, and was indirectly related to changes in parent-child

play 12 months later (Burchinal, Follmer, & Bryant, 1996; Ghazarian & Roche, 2010; Green, Furrer, & McAllister, 2007). Likewise, comparisons between demographically comparable groups indicate fewer sources and lower quality of social support among mothers identified as maltreating (Bishop & Leadbeater, 1999).

***Cognitive and Intellectual Abilities.*** Parents' cognitive and intellectual resources have consistently been associated with positive parenting practices. When considering parent educational achievement, a strong correlate of cognitive and intellectual resources, parents with higher levels of education are less likely to perceive their children as being difficult and are more likely to feel capable to handling parenting responsibilities (Coleman & Karraker, 1998; Fox, Platz, & Bently, 1995). Parents with higher levels of education have also been found to display higher levels of positive parenting behaviors, and higher levels of visual and verbal responsiveness (Blacher, Baker, & Kaladijian, 2013; Richman, Miller, & Levine) 1992). Bradley and colleagues (1993) found that parent intellectual abilities were positively related to a home environment high in parental involvement among parents with low, average, and high intellectual abilities.

***Physical Health.*** Somewhat limited evidence suggests that parent physical health also influences parenting behavior. Studies suggest that parents with physical health problems respond to illness in their children with more negative emotionality and more extreme behavioral responses, whereas higher levels of parent health are related to higher levels of positive parenting behaviors (Ellingsen, Baker, Blacher, & Crnic, 2014; Scalzo, Williams, and Holmbeck, 2005). Furthermore, parents reporting poor physical health were more likely to treat their children as sick, to take their children to see a doctor, to

keep their child in bed and out of school, were more likely to respond positively to their children's desire to maintain close physical proximity to their parent at all times, and were more likely to display reduced parenting efficacy (Nehring & Cohen, 1995; Scalzo et al., 2005). Data also indicate that parents who experience chronic pain are more likely report poorer relationship qualities with their children, and are more likely to engage in permissive parenting behaviors; and that medically ill and otherwise healthy parents who suffer from fatigue report difficulties with monitoring their children's activities (Evans, Shipton, & Keenan, 2006; White, White, & Fox, 2009).

**Child Characteristics.** Researchers concerned with child contributions to parent behaviors have reported a complex pattern of findings, and have largely focused on the contributions of child temperament, with a much of the available research focused on challenging child traits. Maccoby, Snow, & Jacklin (1984) found that mothers of challenging boys became less involved with teaching activities over the first year of life. Similarly, Van den Book and Hoeksma (1994) found that mothers showed less involvement, less responsiveness to positive bids, and less visual and physical contact towards highly irritable infants. Further associations have been found suggesting that parents of children who exhibit challenging temperaments tend towards poor parenting and unresponsiveness (e.g. Hemphill & Sanson, 2000; Hinde, 1989; Kyrios & Prior, 1990; Linn & Horowitz, 1983).

Beyond temperament, several studies have found significant connections between other child characteristics and parenting behavior. Barkley and colleagues (1989) found that parents were less aversive when their children with ADHD diagnoses were taking

medication. Likewise, parents were found to respond to boys labeled as having conduct disorder more negatively than with their own children (Anderson, Lytton, & Romney, 1986). Likewise, some evidence suggests that children's language development may impact parenting, and it is widely believed that children's behavior in any given moment directly impacts parent behaviors (Karraker & Coleman, 2005). There has also been some evidence to suggest that child gender can impact the ways in which parents engage in parenting (Okagaki & Divecha, 1993).

### **Resources as Moderators**

The findings presented above largely focus on direct effects to parenting behavior, but it is important, as Beslky (1984) and others have pointed out, to acknowledge that the determinants of parenting are complex, and exist as part of a dynamic and transactional system. Conger and colleagues (1992) highlight the importance of considering the moderating or buffering effects of resources in predicting resilience among families experiencing adversity.

The determinants of parenting literature provides ample support for the importance of two specific types of resources as moderators, cognitive resources and social support. One study reported that parent's cognitive and intellectual resources moderated the association between socioeconomic status and parenting, such that parents with higher education demonstrate fewer controlling behaviors than comparably high-risk but less educated parents (Fox et al., 1995). Additionally, Coleman and Karraker (1997) propose that parents with greater cognitive resources might feel more capable of handling the demands of parenting. Cognitive resources have also been found to moderate the

relationship between child characteristics and parent behavior, such that parents with greater cognitive resources were likely to increase their support towards children perceived as difficult, whereas parents with limited cognitive resources were likely to decrease support (Neitzel & Stright, 2004).

In addition to direct effects, numerous studies report the moderating effects of social support on parenting. Simons and colleagues (1993) found that the availability of support from a spouse moderates the impact of contextual stress by reducing the impact of depression on parenting behaviors. Similarly, Hashima and Amato (1994) found a significant interaction between social support and SES, suggesting that parenting is more strongly impacted by social support among families living in poverty than among families with greater financial resources. Furthermore, several studies indicate that social support buffers the relationship between contextual stress and parenting behavior, such that higher social support dampened the impact of stress on parenting behavior (Crnic & Greenberg, 1990; McConnell, Breitkruez, & Savage, 2010).

### **Parenting Interventions**

Existing parenting intervention research suggests that enhancing parent functioning is a fruitful avenue for promoting children's resilience and functioning in the face of various forms of adversity, and demonstrates a capacity for change and malleability. In a study following children of divorced parents, parents who participated in Parent Management Training-Oregon model (PMTO), an intervention based in the SIL and focused on developing a range of parenting skills, significantly altered their parenting behavior within 12 months of intervention, and these parenting changes led to subsequent

reductions in child problem behaviors (Degarmo, Patterson, & Forgatch, 2004). Furthermore, 9-years post-intervention, children of parents who completed the PMTO intervention demonstrated lower levels of teacher-reported behavior problems, and fewer arrests than children in the control group (Forgatch, Patterson, DeGarmo, & Beldavs, 2009). Stanaton and colleagues (2004) found that the addition of a supplemental parent intervention component with an adolescent risk-reduction intervention resulted in enhanced and more broadly sustained reductions in adolescent risk behaviors compared to the intervention without the parent supplement.

### **Current Study**

The overall goal of this project was to understand how historic and contemporary adversity, available resources, and current emotional distress are related to parenting quality among families living in emergency housing. This study had four specific aims. The first was to compare theoretically and empirically derived models of parenting quality as assessed using multiple observational methods. The second aim was to examine the combined influence of adversity, resources, and emotional distress for parenting quality during shelter stay. The third aim was to examine the moderating effects of available resources on the impact of adversity and emotional distress on parenting. The final aim was to examine characteristics of resilient parents through person centered analysis.

Aim 1. The first aim of this project was to examine the underlying structure of parenting through the use of multiple measures of observed parenting quality. Measures included ratings of parent warmth and structure completed by clinical judges;

observational ratings of positive and negative parenting practices based on coding structured parent-child interactions using the most recent revision of the system developed by Forgatch and colleagues (2011) for the Oregon model of Parent Management Training (PMTO); and microsocial codes of parent co-regulatory behavior based on state-space grid methodology and the coding system developed by Herbers (2014). Given substantial empirical support for these two parenting constructs, it was expected that a two-factor model of parent warmth and parent structure would be identified.

Aim 2. The second aim of this project was to examine the role of historic and contemporary adversity, emotional distress, and resources for parenting, while taking into account child contributions parent behavior (See Figure 1). It was expected that historic adversity, recent adversity, emotional distress, and available resources would all make unique contributions to parental warmth and parental structure. More specifically, it was expected that greater disruption to current family stability (recent adversity and emotional distress) would prove more detrimental to parenting quality than historic adversity. It was also expected that available resources would be positively associated with parenting quality. It was also expected that impact of adversity and resources would have a greater impact on parental warmth than parental structure, given a strong connection between stressful experiences and affect.

Furthermore, it was expected that parent mental health would be significantly related to parent warmth and structure, that high levels of historic adversity would significantly contribute to higher levels of emotional distress in this context, and that

higher levels of emotional distress would be associated with lower levels of parental warmth and structure. Additionally, it was expected that emotional distress would be associated with recent adversity and available resources. Again, it was expected that parental warmth would be more strongly impacted by mental health functioning than parental structure.

Aim 3. The third aim of this study was to examine the moderating effects of resources on parenting behavior. In line with the Family Resource Model (Conger and Conger, 1992), it was expected that overall resources would significantly moderate the relationship between adversity and parenting. Furthermore, it was expected that cognitive resources and social support would have the strongest moderating effects on the relationship between adversity and parenting. The relationship between emotional distress and parenting was expected to be moderated by available social support.

Aim 4. The fourth and final aim of this study was to examine patterns of risk and resources associated with parenting resilience during crisis. In line with other resilience research (e.g. Masten et al, 1999) it was expected that highly resilient parents would have more available resources and lower levels of emotional distress than maladaptive parents. It was also predicted that resilient parents would have greater social and cognitive resources, than maladaptive parents.

## **Method**

### **Participants and Recruitment Procedures**

Data for this project were drawn from a larger study of risk and protective processes for achievement in children living in emergency housing. Families with

children between the ages of 4 and 7 years were invited to participate in the larger study if they had stayed in emergency housing for at least three nights. To be eligible for participation parents were required to speak English with enough proficiency to complete informed consent and study tasks. Families were ineligible to participate if the target child completed this protocol in the preceding year, or had a previous diagnosis of a developmental disability, disorder, or other impairment that prevented the completion of study tasks. Participation was limited to one child per family, with preference given to any child entering kindergarten; otherwise the target child was selected randomly.

Recruitment was done at three Minneapolis family housing shelters, a large publicly funded shelter, a large privately funded shelter, and a small privately funded shelter. Procedures were varied based on the policies and layout of each shelter site. At the large public shelter, undergraduate and graduate researcher assistants staffed a recruitment table at scheduled meals, hung fliers in elevators and on bulletin boards in common areas, and slid fliers under the doors of eligible families' rooms. At the large privately run shelter, research staff placed recruitment letters in eligible families' mailboxes, attended and made announcements at weekly meetings for families, and made phone calls to the room phones of eligible families. Based on word-of-mouth from shelter staff and families that had previously participated, many families at both large shelters sought out researchers for information about participation. At the small private shelter, shelter staff approached eligible families, and encouraged those who were interested to meet with research staff on-site to learn more about participation.

Across all shelter sites, 191 eligible families were identified, and research staff successfully scheduled meetings with 153 of these families (80% of eligible families). From those, 140 families provided consent for participation (73% of total eligible; 91.5% of scheduled families), and 13 declined participation (6.8% of total eligible; 8.5% of scheduled families). Two families provided consent for participation, but were unable to complete the study. In one case a child was unable to separate from the parent for the child portion of the protocol, and in the other case the parent remembered a conflicting appointment and was therefore no longer able to participate. Remaining families failed to attend scheduled appointments, were unable to reschedule appointments before moving from the shelter, or did not come in direct contact with research staff before moving from the shelter or before the end of data collection.

This current study sample included 138 parents (128 biological mothers, 5 biological fathers, 5 non-biological parents) and 138 young children (78 female, 60 male) entering kindergarten or first grade in the upcoming school year. Parents were primarily from racial/ethnic minority backgrounds (63.7% African American, 11.6% Caucasian, 10.9% Multiracial, 7.2% American Indian, 2.2% Asian, 1.4% Native African, 2.9% other), and ranged in age from 20 to 57 ( $M=30$ ). Most families had a single parent, however, 37 had two parents present in shelter. Of these, 17 second parents (i.e., non-primary caregivers) completed a research interview, though these data were not included in the current study.

### **Study Procedures**

The consent process and all study procedures took place on-site in a designated space within each of the shelters. Families who expressed interest in participating met with research staff for approximately 15-minutes to complete the informed consent process. Research staff read consent forms aloud to facilitate understanding and provide opportunities for parents to ask questions, while another team member played quietly with the child in the same room. Once parents completed the consent forms, research staff provided a developmentally appropriate verbal description of the study and its procedures to child participants, and asked children to provide verbal assent. Both parents and children were expressly informed about the limits of study confidentiality, and about their rights to withdraw consent/assent at any time without repercussion.

Once the consent process was complete, a member of the research team took the child participant to a neighboring room to complete a battery of tasks designed to assess executive and intellectual functioning. Researchers also asked children to provide saliva samples at twenty-minute intervals, so that levels of salivary cortisol could be assessed. This entire battery was video recorded. Data from this hour-long child session were not used in the current study.

While children were completing the intellectual and executive assessments, parents completed an hour-long interview with another member of the research team. During this interview, parents were asked to provide demographic information, child and family history of risk and adversity, child health and behavior ratings, and ratings of their own mental health functioning. At the end of the interview, parents were provided with instructions for the next part of the study session.

Upon completion of the independent parent and child portions of the study session, the child participant was brought back into the parent interview room, and parents and children engaged in a series of eight structured Family Interaction Tasks (FITs). Before the child was allowed to enter the parent interview room, the room was arranged so that the both the child and parent had specific seats, within view of a video camera. Placed behind parents, and within the sightline of the child's seat were two shelves, each populated with a specific set of toys. On the upper of the two shelves were highly desirable toys (a Bratz doll with some accessories, a brightly colored Nerf football, a Spiderman action figure on a 'working' motorcycle, a colorful stretchy yo-yo, and a multicolored xylophone with mallets). On the lower of the two shelves were less desirable toys (a deck of playing cards, a tube filled with small plastic turtles and frogs, a stuffed guinea pig, the game Jenga, multicolored jacks, a children's storybook, and a sticker book). All tasks were administered in the order described below, and all parents were given standardized instructions. The entire sequence of tasks took approximately 50 minutes to be completed, with short breaks for instructions and set-up between each task.

***Free Play.*** For the first task, parent and child were left alone together and instructed to "take a break and talk or play with some of the toys." Before the start of the interaction tasks, parents were instructed not to allow their child to play with the toys on the upper of the two shelves, and were expected to enforce this rule during Free Play.

***Clean Up.*** When the Free Play task was over the researcher reentered the room, and gave the parent a magazine to read. Again, prior to the interaction tasks, the parent was told to instruct the child to clean up the toys. The researcher did not give the parent

any other guidance on this task, and allowed parents to implement the clean up in whatever way they saw fit. As a reminder, a small sticker was placed on the front of the magazine with the instructions for the task. After providing the magazine, the researcher again left the room.

***Problem Solving 1.*** During the independent parent section of the study session, the researcher helped the parent to identify a topic that generated conflict between the parent and child. After the Clean Up task, the parent and child were instructed to spend several minutes talking about the issue the parent selected, and to try to come to a solution. As with the previous tasks, the researcher left the room after providing task instructions. Common issues selected by parents included arguing with siblings, following family rules, and cleaning up.

***Problem Solving 2.*** During the independent child section of the study session, researchers asked children to identify two potential issues of conflict for discussion. After Problem Solving 1, the researcher returned to the room and instructed the pair to spend several minutes discussing the issue that the child selected, and to try to come to a solution. In the event that the parent and child's first choice issue was the same, the child's second choice issue was discussed. Again, after providing the instructions, the experimenter left the room. Children commonly selected cleaning up, fighting with siblings, and spending more time doing fun activities, as issues for discussion.

***Labyrinth.*** During this task, the researcher asked the parent and child to engage in a series of games using a modified wooden Labyrinth board game. At first the parent and child worked together to move four marbles into holes at the four corners of the board.

Games became progressively more competitive until, in the final game, the parent and child were provided one marble and told that the first person to move the marble to one of their holes won the game. The researcher remained in the room throughout this task.

***Safety Plan.*** During the independent parent section of study session, the researcher provided the parent with a list of issues related to safety, and helped the parent to select one for discussion. After the Labyrinth task, the researcher instructed the parent and child to discuss the concern the parent selected and to try to generate a plan so that the child would be safe. Again, the experimenter left the room after giving these instructions. Commonly selected safety concerns included interacting with strangers, getting lost, crossing the street, interacting with bullies, exposure to drugs, safety in cars, and exposure to weapons (e.g., guns, knives).

***Guessing Game.*** For the Guessing Game task, the parent was given a deck of several cards, each with a simple word and picture on it (e.g., plane, flower, vegetable). The parent was then given three minutes to provide the child with clues so that the child might guess what was on each card. Next, the child was provided with a comparable deck of several cards, and was allowed three minutes to give the parent clues so that the parent might guess what was on each card. During this task, the research remained in the room.

***Tangoes.*** For the final interaction task, the child was given a set of seven geometric shapes from the commercially available game Tangoes, and the parent was given a set of ordered cards, each printed with a design that could be made using the geometric pieces. The parent was told to help the child use the pieces that were provided

to make each of the designs shown on the cards. During this task, the researcher remained in the room.

Once the interaction tasks were complete, parents received an honorarium of \$40 in Target gift cards, and children received several small toys and one larger toy valued at \$10. During the school year following participation, children's teachers were contacted and asked to provide comprehensive ratings of child functioning in the classroom. Teacher reported data were not used in this study.

### **Measures**

**Historic Adversity.** Data on experiences of historic adversity were drawn from two study instruments, the Life Time Events-Parent checklist and a structured Parent Interview.

***Life Time Events - Parent.*** The Life Time Events – Parent (LTEP) is a checklist designed to record individuals' experiences of significant life experiences. Parents were asked whether or not they had ever experienced a number of events (e.g., "Parent hospitalized for a problem with drugs or alcohol") and to indicate whether the events occurred before the age of 18, after the age of 18, or both before and after the age of 18 (see Table 1). In its standard form, the number of endorsed experiences is tallied, resulting in a sum of life events before age 18 and a sum of life events after age 18.

***Parent Interview.*** The semi-structured Parent Interview consists of a series of free-response and forced-choice questions that research staff administered to parents by reading each item aloud and recording parents' responses. The content of the Parent

Interview was wide ranging, and included questions assessing demographic information, risk, adversity, parenting, family history, child functioning, and family well-being.

For the purpose of creating an historic adversity variable, items from the LTEp that were classified as negative experiences (20 items; e.g., “You were a victim of violence”) were summed, and items that were ambiguous or positive (4 items; e.g., “You were married”) were excluded. From the Parent Interview, endorsements to a question assessing the experience of neglect as a child was added to the LTEp score. The resulting measure of historic adversity (Table 5) had a possible range of 0 to 21. The observed range of summed experiences was 0-14, with a mean of 2.6 adverse experiences endorsed ( $SD=2.4$ ).

**Recent Adversity.** Recent adversity data were drawn from three study instruments: the semi-structured Parent Interview (described above), the Life Events Questionnaire-Child, and the U.S. Household Food Security Survey Module.

***Life Events Questionnaire – Child.*** The Life Events Questionnaire-Child (LEQ) is a checklist on which parents indicated whether or not their child experienced any of a number of adverse experiences during the past 12 months. Additionally, parents were asked to indicate on a Likert-type scale, how stressful the past year had been for their child and how stressful the past year had been for them. Based on published guidelines, items were grouped into specific categories, and affirmative responses were summed.

***U.S. Household Food Security Survey Module.*** The U.S. Household Food Security Survey Module (USDA-ERC, 2006) is designed to assess the extent to which families did not have adequate food resources during the past year, and consists of

separate modules that can be administered independently of the others. For the short module used in this study, parents responded to seven questions about their children's food situation during the past 12 months (e.g., I could not feed my child a balanced meal, because I couldn't afford that.). Affirmative responses to items were summed, resulting in a raw food insecurity score, such that higher values reflect greater food insecurity.

The Recent Adversity measure (See Table 2) represents the summation of adverse experiences from each of these three instruments. Items from the Parent Interview on which parents reported the safety of their previous neighborhood, reasons for current homelessness, current employment status, and having unmet child service needs were coded so that the presence of an adverse experience resulted in a higher score (14 items). Many items from the LEQ were excluded from the Recent Adversity Score because of ambiguity about the impact of specific child experiences on the caregiving parent (24 items; e.g., A family member ran away). Items that were thought to have an unambiguously negative impact on parents were summed (6 items; e.g., Child was a victim of violence). The raw score from the Food Security Survey was transformed to conform to a 0 to 1 scale, with 1 representing the highest level of food insecurity. The resulting measure of Recent Adversity had a possible range of 0 to 21. The observed range of experiences was 0 to 10.5, with a mean score of 5.1 ( $SD=2.2$ ).

**Mental Health Symptoms.** Data on parents' current mental health functioning were drawn from the semi-structured Parent Interview and the Life Events Questionnaire (both described above), as well as from the Hopkins Symptom Checklist-25, the PTSD Checklist-Civilian, and from Parent Behavioral Ratings made by research staff.

***Hopkins Symptom Checklist-25.*** The Hopkins Symptom Checklist-25 (HSCL-25; Glass, Allan, Uhlenhuth, Kimball, & Borinstein, 1978), is a 25-item measure of anxiety and depression symptoms. For each item, parents indicated how much they had been distressed or bothered by a particular symptom on a scale ranging from Not At All (1) to Extremely (4). The total score, indicative of overall emotional distress was calculated by taking the average of responses to all 25 items.

***PTSD Checklist – Civilian.*** The PTSD Checklist-Civilian (PCL-C; Weathers, Litz, Huska, & Keane, 1994) is a measure of trauma symptoms specifically adapted for civilian populations. For each item, parents indicated how much they had been bothered by a given problem in the past month on a scale ranging from Not At All (1) to Extremely (5). Responses were summed, resulting in a single score representing trauma severity.

***Parent Behavior Ratings.*** The Parent Behavior Ratings (PBR) is a 29-item measure designed to assess research staff members' impressions of parents' social and behavioral functioning during the parent portion of the study session. Research staff responsible for leading the parent portion of the study session were instructed to complete this measure before the start of the FITs, and to base their ratings on interactions with, and observations of, the parent without the child present. Items were rated using Likert-type scales.

To create the Mental Health Symptoms measure (See Table 3), parents' ratings of their current mental health functioning (Parent Interview), their ratings of stress during the past year (LEQ), total scores from the HCL-25, total scores from the PCL-C, and researchers' ratings of the parent mood (PBR), researchers' ratings of parent self-

criticism (PBR) were all standardized. Reliability among the six components was good ( $\alpha = .86$ ), and they were composited giving equal weight to each component ( $M = .01$ ,  $SD = .77$ .)

**Resources.** Data regarding parent resources was drawn from the semi-structured Parent Interview and from the Parent Behavior Ratings (both described above; see Table 4). A single resource composite was created from four standardized components described below ( $M = -.002$ ,  $SD = .66$ ).

**Cognitive/Intellectual.** An indicator of cognitive resources was created from parents' reports of their highest degree obtained (Parent Interview) and from researchers' ratings of parents' difficulty tracking and comprehension during the session, clarity of expression during the session, and estimated intellectual ability (PBR). Responses from the PBR were recoded when necessary so that higher scores were indicative of greater cognitive and intellectual resources. Items demonstrated good reliability ( $\alpha = .74$ ) and were averaged to create a single PBR score. The PBR score was standardized and was then averaged with the standardized Parent Interview item, resulting in a single cognitive and intellectual resources measure ( $M = -.003$ ,  $SD = .83$ ).

**Social Support.** An indicator of available social support was created from three Parent Interview items: parents' report of their last contact with family members, the quality of their relationship with their child's other parent, and whether or not they had other adults staying with them in shelter. Item responses were transformed to a scale ranging from 0 to 1, and were summed. The resulting measure of social support had a possible range of 0 to 3, an observed range of 0 to 3, and a mean value of 1.77 ( $SD = .70$ ).

***Agreeableness.*** An indicator of parents' agreeableness, thought to be an indication of personality and more general social skills, was created from researchers' ratings of parents' social ease, eye contact, friendliness, appropriate laughter and smiling, likeability, and ease of establishing rapport (PBR). Items demonstrated excellent reliability ( $\alpha = .91$ ) and were standardized and composited ( $M=0.00$ ,  $SD=.83$ ).

***Physical Health.*** An indicator of parents' physical health was created using parents' report of their recent physical health (Parent Interview) and researchers' ratings of parents' healthiness during the session ( $r=.36$ ,  $p\leq.01$ ). Items were standardized and averaged with equal weight, resulting in a single measure of physical health ( $M=-.01$ ,  $SD=.83$ ).

***Parenting Quality.*** Observed parenting quality was measured using three different coding systems described below (Table 6). All parenting quality data were derived from videos of the FITs portion of the study session, and each coding system was implemented independently, with no overlap in research staff on coding teams.

***Coder Impressions of Family Interaction Tasks.*** Led by an advanced graduate student with expertise in this rating system, a team of six highly trained advanced undergraduate students and recent college graduates completed a coder impressions questionnaire after viewing each segment of the FITs (see Plowman, 2012). The coder impressions questionnaire was adapted from previous versions for use in this study by the original developers of this coding system (Forgatch, Plowman, Gewirtz, & Subbs, 2010). Coders were trained to base their ratings on observations of things like speech content and tone, body language, facial expression, frequency of behaviors, and congruence

between speech and behavior. Coder responses to items on the ratings questionnaire were used to derive four parenting quality scales: problem solving, positive involvement, skill encouragement, and inept discipline. All coders rated a randomly selected sample of eight FIT videos to determine interrater reliability. Interclass correlations were calculated for each of the five scales, with values ranging from .81 to .92 (Plowman, 2012).

*Problem Solving.* The problem solving scale is a task-specific measure of the extent to which parents were able to facilitate the resolution of a problem, engage their children in the problem-solving process, and remain supportive during the process. To calculate the scale, items from the first and second problem solving tasks (See Table) were averaged, resulting in two subscale scores. These subscale scores were then composited ( $M=2.04$ ,  $SD=.63$ ,  $ICC=.81$ ).

*Positive Involvement.* The positive involvement scale assessed the amount of warmth, affection, and interest parents directed toward their child, as well as the exchange of positive affect between the parent and child. This scale was created using 37 items drawn from multiple tasks. These items were composited, resulting in the problem solving scale ( $M=2.79$ ,  $SD=.52$ ,  $ICC=.92$ ).

*Skill Encouragement.* The skill encouragement scale is a measure of the extent to which parents provided direction, support, and scaffolding to their children in the mastery of new skills. The scale was created using 15 items rated across the Guessing Game, Labyrinth, and Tangoes tasks during the FITs. Items were composited resulting in a single skill encouragement score ( $M=2.93$ ,  $SD=.66$ ,  $ICC=.81$ ).

*Inept Discipline.* The inept discipline scale is a measure of the extent to which parents used discipline strategies that were coercive in nature. Items for the creation of this scale were drawn from throughout the FITs. Items were composited resulting in a single score representing inept discipline ( $M=2.20$ ,  $SD=.40$ ,  $ICC=.89$ ).

***Global Coding.*** A separate team of two highly trained clinical coders independently rated FITs videos based on two common dimensions of parenting, namely structure and warmth (Sroufe, Egeland, Calson, & Collins, 2005; Caspi et al., 2004). Coders rated videos on seven subscales, four of which were conceptualized as subordinate to warmth, and three of which were conceptualized as subordinate to structure.

Parent warmth subscales include ratings of parent positive responsiveness, warmth, harshness/hostility, and negativity. Parent positive responsiveness scale measured the extent to which the parent showed concern towards the child, and responded to the child's positive affect reciprocally. Parent positive responsiveness was rated on a five-point Likert-type scale ( $M=3.53$ ,  $SD=.92$ ). To assess warmth, measured on a six-point scale, coders attended to parents' sympathy, empathy, and tone of voice towards the child ( $M=3.25$ ,  $SD=1.06$ ). The harshness/hostility scale measured the extent to which parents demonstrated angry, resentful, negative, and/or punitive attitudes towards the child using a five-point scale ( $M=2.27$ ,  $SD=.77$ ). Negativity, a six-point scale, was assessed based on parents' negativistic expressions about their child, displays of a critical attitude toward the child, and displays of dissatisfaction with the child ( $M=1.53$ ,  $SD=1.07$ ).

Parent structure subscales, all coded on five-point, Likert-type scales, include parent quality of assistance, support of autonomy, and structure and limit setting. Quality of assistance measured the extent to which parents understood their children's needs, adequately addressed those needs, and helped the child to navigate through the FITs ( $M=3.54$ ,  $SD=.83$ ). The support of autonomy scale assessed parents' cognizance of their child's individual abilities, thoughts, and behaviors, and the extent which parents established a developmentally appropriate environment that was respectful of their child's skills and abilities ( $M=3.47$ ,  $SD=.88$ ). To assess structure and limit setting scale, coders attended to parents' establishment of behavioral expectations for their child, and their consistent follow-through in supporting and enforcing those expectations ( $M=3.73$ ,  $SD=.99$ ).

***State Space Grid Coding.*** A team of coders also rated the FITs videos on a second-by-second basis, using a scheme developed to examine parent-child co-regulation (Herbers, 2013). Separate teams coded parent behavior and child behavior. Coders were trained to attend to and indicate one of four behavior codes during each second of the interaction session, exclusive of transition times during which research staff provided task instructions. Parent behavior codes included positive control, non-directive responsiveness, disengaged/distracted, and negative control.

The positive control code was used whenever parents were observed to be engaging in positive and constructive strategies to regulate the child, and was engaging in those strategies with a positive or neutral tone. The negative control code was assigned when parents' behaviors were intended to control the child, and could be characterized as

harsh, punitive, insensitive, and/or intrusive. Coders assigned the disengaged/distracted code when parents were ignoring their child, were distracted by something else, were preoccupied with themselves, or were not participating in the interactions at all. Non-directive responsiveness codes were assigned when parents were involved and responsive with the interaction, but were not specifically attempting to control or modify their child's behavior.

Data from second-by-second coding were compiled resulting in a duration score representing the proportion of time spent by each parent engaging in each of the four behaviors. Inter-rater agreement for each of the parent behavior codes ranged from moderate to substantial ( $K = .59$  to  $.70$ ). Because the four codes together accounted of the entire duration of the FITs, inclusion of all four codes for analysis was untenable. Only positive control, disengaged/distracted, and negative control were used in the present project.

### **Control Variables.**

***Demographic Controls.*** Given consistent associations between age, sex, mental health functioning, and adversity experiences, parents' age and sex were controlled for during path and regression analyses (Table 7). Demographic information was collected via the Parent Interview.

***Child On-Task Behavior.*** To acknowledge the dyadic nature of parent-child interactions, and to account for child contributions to parenting, the child on-task behavior duration variable from the state-space grid coding of the FITs was included as a control during path and regression analyses. Coders on the state-space grid team who

focused exclusively on child behavior, classified each second of child behavior as either on-task, withdrawn, defiant/disobedient, or signal/bid. The child on-task behavior variable represents the proportion of the FITs session that the child was engaged in behavior that was consistent with the demands of the current task and with parent's instructions.

## **Results**

Consistent with study aims, results are presented in three parts. The first part centers on hypotheses concerning the factor structure of observed parenting quality. The second section is concerned with results from hypotheses regarding predictors of parenting quality. The final section presents hypothesized and exploratory person-centered analyses focused on resilient and maladaptive parents.

### **Parenting Quality**

Initially, the feasibility factor analysis using the 14 parenting quality measures was evaluated using several well-recognized criteria. First, simple correlations of all parenting quality variables were examined (Table 8), and all variables were significantly correlated with at least one other variable ( $p \leq .05$ ) at the .3 level or higher. Next, the Kaiser-Meyer-Olkin measure of sampling adequacy was .89, above the commonly recommended cut-off of .6, and Bartlett's test of sphericity was significant ( $X^2(91) = 1452.46, p < .5$ ). Further confirming suitability for factor analysis, the diagonals of the anti-image correlation matrix all exceeded .5, and communalities were all above .3.

Initial attempts to split the sample at random into two groups, one of which would be subject to exploratory factor analysis (EFA) and the other confirmatory factor analysis

(CFA) using the results from the EFA were unsuccessful due to issues of model nonconvergence. As a result, the underlying factor structure of observed parenting quality was examined using and EFA with the entire sample. The EFA was conducted using IBM SPSS Statistics 21 (IBM, 2012). Based on the recommendations of Costello and Osborne (2005), the maximum likelihood extraction method was selected. Because there was substantial reason to suspect that any resulting factors would not be orthogonal, a direct oblimin rotation using SPSS' default settings ( $\delta = 0$ ) was used in all analyses.

In initial analyses based on the Kaiser criterion, two factors emerged with eigenvalues greater than 1.00. Visual examination of the resulting scree plot implied a possible third factor, which had eigenvalue of .97. Based on these results, subsequent analyses were run, attempting to force the data to conform to a three-factor solution. The results of these analyses accounted for 74.9% of total variance prior to rotation; however, a rotated solution could not be extracted.

The subsequent two-factor solution accounted for 67.96% of total variance prior to rotation, and the resulting factors were correlated at  $-.50$ . Table 9 shows factor loadings and communalities for each variable included in the analysis. All components loaded onto at least one of the two factors above  $.3$ ; two components loaded on both factors.

Parent Involvement was the highest loading component of rotated factor 1, followed by Skill Encouragement, Quality of Assistance, Problem Solving, Positive Control duration, Positive Responsiveness, Warmth, Support of Autonomy, Structure and Limit Setting, Inept Discipline, and Disengaged/Distracted duration respectively.

Negativity was the highest loading component of rotated factor 2, followed by Harshness/Hostility, and Negative Control. Two components, Positive Responsiveness and Support of Autonomy cross-loaded onto rotated factor 2, though both had high primary loadings on rotated factor 1 (.61 and .58 respectively).

Based on the content of their respective primary components, rotated factor 1 was labeled as Warmth and Structure and rotated factor 2 was labeled as Harshness and Negativity. Internal consistency for both factors was examined using Cronbach's alpha. Warmth and Structure (11 items) demonstrated excellent internal consistency ( $\alpha=.94$ ) and the elimination of any items would not have resulted in substantial increase in alpha. Harshness and Negativity (3 items) demonstrated good internal consistency ( $\alpha=.87$ ), which would not have improved substantially with the elimination of any items.

Composite scores were created based on the components' primary factor loadings (See Table 10, Table 11). Inept Discipline and Disengaged/Distracted were reverse scored, and all components were standardized before compositing. The resulting Warmth and Structure composite was approximately normally distributed (skewness=-.32, kurtosis=-.44) and ranged from -2.0 to 1.6, with higher values representing higher levels of Warmth and Structure ( $M=-.01$ ,  $SD=.79$ ). Harshness and Negativity showed an acceptable distribution (skewness=.80, kurtosis=1.0) and ranged from -1.44 to 3.42, with higher values representing higher levels of Harshness and Negativity ( $M=.00$ ,  $SD=.89$ ). Both composites were sufficiently normal to allow for parametric analyses.

### **Predictors of Parenting Quality**

To test hypotheses about the relationships between independent variables and parenting quality, a combination of path analysis and regression analyses were used. Path analyses were used to evaluate the hypothesized model for predictors of parenting quality. Hierarchical multiple regression analyses were conducted to address hypotheses about proposed moderators.

**Path Analysis.** The conceptual model of hypothesized relationships is depicted in Figure 1. The hypothesized model was assessed in R version 3.1.0 (R Core Team, 2014) using the lavaan package (version 0.5-16 ; Roussee, 2012). Missing data were handled using Full Information Maximum Likelihood (FIML) estimation procedures. FIML estimation is a preferable approach because it produces less biased estimates than alternative methods and does not presume data are missing completely at random (Enders & Bandalos, 2001). This model tested direct effects of historic adversity, recent adversity, mental health functioning, and resources for parent warmth and structure and for parent harshness and negativity. This model also tested for indirect effects of historic adversity on the two parenting quality outcomes through recent adversity, mental health functioning, and resources. Lastly, the model controlled for the impact of age and gender on historic adversity, and for the impact of child behavior on the outcome variables.

The resulting model, depicted in Figure 2 had acceptable model fit ( $X^2 = 18.38$ ,  $df=14$ ,  $p=.19$ ;  $RMSEA=.05$ ;  $CFI=.97$ ;  $TLI=.93$ ). Examination of direct effects indicated that parent warmth and structure was related to historic adversity ( $\beta= .19$ ,  $Z=2.54$ ,  $p <.05$ ; See Table 12) and resources ( $\beta= .34$ ,  $Z=4.11$ ,  $p <.01$ ), but not to mental health

functioning and recent adversity. Likewise, parent warmth and structure was associated with child on-task behavior ( $\beta = .38$ ,  $Z = 5.16$ ,  $p < .01$ ).

Parent harshness and negativity was related to child on-task behavior ( $\beta = -.45$ ,  $Z = -5.66$ ,  $p < .01$ ) and parent warmth and structure ( $r = .46$ ,  $p < .01$ ). Parent harshness and negativity was not significantly related to historic adversity, recent adversity, mental health symptoms, or resources.

Recent adversity was significantly related to historic adversity ( $\beta = .27$ ,  $Z = 3.32$ ,  $p < .01$ ) and was significantly associated with mental health functioning ( $r = .30$ ,  $p < .01$ ). Mental health functioning was related to historic adversity at the level of a trend ( $\beta = .12$ ,  $Z = 1.89$ ,  $p < .10$ ) and was significantly negatively associated with resources ( $r = -.36$ ,  $p < .01$ ). Resources were not significantly related to historic adversity or recent adversity. Age and sex were not significantly associated with historic adversity.

**Multiple Regression Analysis.** Hierarchical multiple regression analyses were used to test whether resources moderated the relationship between parent warmth and structure and historic adversity. After centering the historic adversity and resource variables, the two were multiplied to create a historic adversity X resources interaction term. In the first step age and sex were entered as control variables. In the next step, the resources predictor was entered, followed by the historic adversity predictor, and lastly the interaction term was added. Consistent with the results of the path analysis, in the final step both historic adversity and resources were significantly related to parent warmth and structure ( $\beta = .20$ ,  $p < .05$  and  $\beta = .38$ ,  $p > .01$  respectively; see table 15); however,

the addition of the historic adversity X resources interaction term was in the final step did not result in a significant change in  $R^2$ .

The same analytic approach was taken to examine the hypothesized contributions and moderating effects of two subcomponents of the resources composite, cognitive resources and social support, on the relationship between parent warmth and structure and historic adversity. Both predictors were centered and independently multiplied with historic adversity, resulting in a historic adversity X cognitive resources term and a historic adversity X social support variable. After controlling for age and sex, both cognitive resources and historic adversity were significantly related to warmth and structure ( $\beta = .32, p < .01$  &  $\beta = .22, p < .01$  respectively; see Table 16); however, the coefficient of the interaction term was nonsignificant. Analyses focused on social support indicated that, after controlling for age and sex, historic adversity was significantly related to parent warmth and structure ( $\beta = .22, p < .05$ ; See Table 17), but social support was not. The addition of social support X historic adversity did not result in a significant change in  $R^2$ .

Testing of hypotheses associated with recent adversity were done with the same approach, and yielded similar results. When testing the moderating effects of the resources composite, only the resources composite was significantly related to warmth and structure ( $\beta = .40, p < .01$ ; See Table 18). Results of analysis including the cognitive resources variable indicated that only cognitive resources were associated with warmth and structure ( $\beta = .34, p < .01$ ; See Table 19). In neither case did the addition of the interaction terms result in a significant change in  $R^2$ . In the case of social support (See

Table 20), none of the entered predictors were significantly related to parent warmth and structure.

Regression analyses of the hypothesized relationships between mental health symptoms, resources, and parent harshness and negativity did not yield a significant interaction effect (See Table 21). After controlling for age and sex, none of the entered predictors was significantly associated with harshness and negativity. Likewise, examination of the moderating effects of social support on the relationship between mental health functioning and parent harshness and negativity indicated that none of the entered predictors resulted in a significant change in  $R^2$  (See Table 22). Exploratory analyses were conducted to test for moderation that was not predicted, however none of the exploratory interaction terms resulted in significant changes in  $R^2$  (See Appendix A).

**Person Centered Analysis.** Person centered analyses were conducted to test hypotheses about attributes of resilient and maladaptive parents. Parents were classified as resilient if they had standardized warmth and structure scores greater than half a standard deviation above the mean, and standardized harshness and negativity scores half of a standard deviation below the mean ( $n=29$ ). Parents with a standardized warmth and structure score less than or equal to  $-.5$ , and a harshness and negativity score greater than or equal to  $.5$  were classified as maladaptive ( $n=20$ ).

Means for the two groups on the identification criteria and on other variables are presented in Table 23. A series of independent samples  $t$ -tests indicated significant mean differences between resilient and maladaptive parents for number of completed years of school ( $t(47)=-2.21, p<.05$ ), with resilient parents reporting higher educational attainment

than maladaptive parents. Group differences in interviewers' estimated intellectual ability were nonsignificant. In the social domain, tests indicated resilient parents scored significant higher on ratings of social ease ( $t(47)=-3.73, p<.01$ ). Differences between groups on the ease with which rapport was established during the session, how well the parent gets along with the child's other parent, and researcher-rated friendliness were nonsignificant. In the domain of mental health and stress, significant mean differences were found for depression symptoms ( $t(47)=2.02, p<.05$ ), with resilient parents reporting lower levels than maladaptive parents. Mean differences between anxiety symptoms, trauma symptoms, and ratings of stress over the past year were nonsignificant.

### **Discussion**

Decades of resilience research indicates that parents are one of the most proximal and enduring factors in fostering resilience in children exposed to adversity, like homelessness (see Masten, 2014; Masten, 2001). Research and theory suggest that parenting is shaped by many factors at multiple levels in a complex ecological-transactional system (Belsky, 1984; Cicchetti & Lynch, 1993). By better understanding factors that contribute to parenting, it might be possible to provide targeted support to parents, in turn promoting healthy development in their children. The goal of this study was to serve as an early step in the process of identifying potential avenues for intervention, by examining parenting in the context of homelessness, as predicted by historic and current functioning, and to illustrate a more complete picture of resilient parenting in this context. To do this, it was first necessary to closely examine the

underlying components of parenting, so as to better understand what measures of observed parenting quality are capturing.

### **Aim 1**

The first aim of this study was to examine the underlying factor structure of observed parenting quality, as measured using three distinct coding paradigms. It was hypothesized that parenting quality would consist of two factors, warmth and structure. Results suggest that two factors fit the available data best; however, the factors that emerged were somewhat different than predicted.

The first factor, called Warmth and Structure, was comprised of a number of items that seem to represent both emotionally responsive caregiving, and the provision structure and limit setting. Parents who were high in this factor might aptly be described as authoritative parents. Though it was predicted that these would be separate factors, it's possible that the context of homelessness is one in which these two facets of parenting – warmth and structure – are inseparable. Given that these two pieces are not orthogonal, the demands of parenting in an emergency housing shelter might make the contrast between high warmth and low structure, or low warmth and high structure unsustainable, resulting in changes in parenting that more closely link the two. A parent who is high in structuring but lower in warmth, may be taxed by the demands of parenting in a disruptive and often chaotic environment, and may reduce their structured parenting behavior to be more on par with their warmth, or such a parent might recognize the potential need for their children to receive additional emotional support and might increase their level of parenting warmth. Likewise, a high warmth and lower structuring parent may recognize

the importance of structuring behavior, and increase theirs accordingly, or may be taxed by the demands of living in shelter, and experience an erosion of their parent warmth.

Alternatively, the measurement of parenting using three distinct methods, derived from similarly informed paradigms may have resulted in items with an overlap that obscured potential a more nuanced structure of parenting. Given that all of the observed parenting measures are tapping into a broader construct of parenting quality, but are doing so from slightly different perspectives, it is possible that the more broad measures of parenting pull related but distinct aspects of parenting into a single factor. The skills necessary to solve problems effectively, for example, likely capture components of both parental warmth and parental structure, and thus may tie together more independent measures of warmth and structure.

The second factor, called Harshness and Negativity, is comprised of items capturing the extent to which parents engaged with their children in hostile, callous, or unsympathetic way. Though this factor was not specifically predicted in this study, its emergence is not unprecedented in parenting research. Studies of parents' expressed emotion, using measures like the Five-Minute Speech Sample pay specific attention to critical statements and negative affect and have found associations between it and coercive parent behaviors (eg., Narayan, Herbers, Plowman, Gewirtz, and Maten, 2012). Many other studies have found that harsh parenting practices are predictive of disruptive behavior in children. For example, Stormashak and colleagues (2000) found that specific parenting behaviors differentially predicted child behaviors, such that parents' punitive discipline was associated with children's physical aggression, oppositional behavior, and

hyperactivity, while warm involvement was exclusively associated with child oppositional behaviors. This suggests that, while many these studies did not purposefully explore the factor structure of parenting, the use of a negative parenting measure has proven useful and has discriminant predictive validity.

It is also possible that the emergence of a clear Harshness and Negativity factor is due in part to the demands of parenting under high stress. Living under conditions of high stress might wear down parents' self-regulatory abilities, and might impair their abilities to inhibit a potentially harsh or particularly negative response to a child transgression. Perhaps in more ideal parenting conditions, many parents would be better able to regulate and monitor their own parenting behaviors, thereby suppressing the emergence of a distinct Harshness and Negativity parenting factor.

## **Aim 2**

The second aim was to examine the significance of Historic Adversity, Recent Adversity, Mental Health Symptoms, and available Resources for observed parenting quality, while accounting for child contributions to parent behavior. It was hypothesized that Historic Adversity would predict higher levels of Recent Adversity, higher levels of Mental Health Symptoms, and lower levels of available Resources. It was also expected that Historic Adversity would be negatively associated with parenting quality. As expected, Historic Adversity was significantly positively associated with recent adversity and mental health symptoms. Parents who experienced high levels of adversity before age 18 tended to experience high levels of adversity during the year prior to participation in this study, and experienced a greater number of mental health difficulties.

Interestingly, while the association between Historic Adversity and Warmth and Structure was significant, it was not in the expected direction. Higher levels of Historic Adversity were associated with *higher* levels of Warmth and Structure. Parents who reported more adversity before age 18 exhibited higher levels of Warmth and Structure towards their children while living in emergency housing. On the other hand, parents who reported the fewest adverse events during childhood were likely to demonstrate the lowest levels of Warmth and Structure in this sample. It is possible that parents who were lower in observed Warmth and Structure were more defensive and underreported experiences of adversity.

Given that the Harshness and Negativity factor was not originally expected, no a priori hypothesis was formulated regarding its relationship with historic adversity. However, once this factor emerged, it was thought to reflect more problematic parenting behavior, and based on studies that included more negative aspects of parenting (e.g., Narayan, et al., 2012) it was expected that Harshness and Negativity would be positively associated with Historic Adversity. Though this association was not significant, a trend in the data suggested that the association was positive, and thus contrary to expectations. Parents who experienced a greater number of adverse events in childhood were generally observed to be less negative and less harsh towards their children than parents who experienced fewer adverse experiences. This result is consistent with the finding for the relationship between Historic Adversity and Warmth and Structure, and would be consistent with the possibility of underreporting of adversity by a subset of parents. It is conceivable that parents who are currently functioning better in a shelter environment are

more open during the reporting on challenging experiences in their past, or more be willing to acknowledge childhood experiences, whereas struggling parents might be more self-protective in their recollections or conversations with a stranger.

It is also possible that the associations between historic adversity and parenting may be influenced by consistency in parents' adverse experiences. The positive association between Historic Adversity and Recent Adversity may reflect consistent experiences with the disruptions associated with emergency housing. Parents who experienced high levels of Historic Adversity may also have consistently experienced higher levels of adversity throughout their lives, and may have habituated to the disruptions and unpredictability of living in emergency housing, such that their shelter stay is experienced as subjectively less stressful and less disruptive to daily functioning than parents with more limited exposure to adversity.

It was also hypothesized that Recent Adversity, Mental Health Symptoms, and available Resources would play more significant roles in predicting observed parenting than Historic Adversity, such that parenting quality would be negatively associated with Recent Adversity, negatively associated with Mental Health Symptoms, and positively associated with Resources. As expected, the relationship between Resources and Warmth and Structure was significant and positive. However, there was no significant relation between Resources and Harshness and Negativity.

The lack of a relationship between parent Mental Health Symptoms and parenting behavior was unexpected, but, again, not without precedent. Existing studies (e.g., Gewirtz et al., 2009) provide mixed support for the broad impact of parent mental health

functioning on parenting behavior. Perhaps the impact of mental health functioning on parenting impacts parenting in highly specific ways, or impacts more highly specific aspects of parenting, and thus requires more fine-grained measurement of parenting for relationships to be found. For example, several studies indicate that parent mental health symptoms are predictive of differential effects on parent warmth from other parenting behaviors. In their meta-analysis Lovejoy and colleagues (2000) found that parent depression differentially impacts positive parenting, negative parenting, and disengaged parenting behaviors, with the strongest effects on negative and disengaged parenting. Since warmth and structure were not found to be a single factor in these data, it is possible that any impact of parent mental health symptoms impacting disengagement likely related to parents' provision of structuring behavior, might be obscured by the lack of a significant relationship between mental health symptoms and warmth. Likewise, the measurement of recent mental health functioning may not have been the most fruitful approach to understanding its impact on parenting, as evidence suggests that current mental health symptoms are more important for parenting behaviors, particularly for negative behaviors, than recent or historic mental health difficulties (Lovejoy et al., 2000).

### **Aim 3**

The third aim was to examine potential moderating effects of available resources on the relationships between both historic and recent adversity and parenting. It was expected that available resources would play a protective role, buffering the potential impact of adversity on observed parenting. Results, however, did not support this

assertion. Available resources were not found to moderate the relationship between adversity and observed parenting behavior. Results instead support an additive model, in which early adversity and available resources provide independent direct effects on parenting quality. From the resilience perspective then, findings suggest that resources convey compensatory effects (Masten, 2001; Luthar et al., 2001) rather than buffering effects (Ensel & Lin, 1991). In other words, in this study, the availability of resources does not seem to change the relationship between adversity and parenting, but instead it appears to be the cumulative impact of adversity and resources that shapes parenting. This failure to find moderating or buffering effects is not uncommon in developmental research, and may be due to the relatively low statistical power to detect such effects in non-experimental studies (Luthar et al., 2000; Masten, 2001; Conger et al., 2002).

#### **Aim 4**

The final aim was to compare the attributes of parents who were manifesting good parenting in a difficult situation with less effective parents, using a person-centered analytic approach. It was expected that parents showing resilience in emergency shelter by their good parenting would have more available resources and lower levels of mental health symptoms than maladaptive parents. It was also predicted that effective parents would have greater social and cognitive resources. Results were generally in line with these hypotheses, with more parents classified as manifesting resilience having greater educational attainment, greater social ease, and fewer symptoms of depression than parents classified as maladaptive. These findings are consistent with other resilience research (e.g., Masten, 2014; Masten et al., 1999) that find important associations

between social, cognitive, and mental health functioning and resilience in the face of adversity.

### **Limitations**

Because this study was cross-sectional in nature, it was necessary to make assumptions about the temporal relationship between variables. Though these assumptions were based in theory, the concurrent measurement of study variables and reliance on retrospective reporting introduces the possibility of bias. Furthermore, parenting processes are dynamic, and multiply determined. While in this study, an attempt was made to control for child behavior, parents and their children have a history of interactions. Collection of longitudinal data would allow for a more clear understanding of the contribution chronology to study findings. Additionally, the longitudinal data would allow researchers to begin to unpack the mechanisms and processes that explain observed relationships.

This study also was limited by the small sample size. Collecting data in emergency shelter settings is challenging and although this study was successful in its original goals, the small sample size afforded limited the power to conduct multivariate analyses of parenting behavior. The ability construct competing models to capture the complexity of parenting in high-stress contexts was limited. Likewise, as mentioned above, the relatively small sample size likely did not provide sufficient power to detect moderating effects of resources on parenting behavior.

This study might also have been enhanced with the inclusion of a more robust measure of social support. Substantial literature suggests the availability of social support

is an important contributor to physical, behavioral, and emotional health; and that social support is of particular importance for parenting among individuals from low SES backgrounds. Furthermore, the social support literature often defines distinct types of support offered including emotional and instrumental support (e.g. Ceballo & McLoyd, 2002). This study relied on a composited measure of social support using available data, which could be considered inferred emotional and tangential social support. Inclusion of a more validated measure of social support that more clearly differentiates types of social support may have resulted in findings more consistent with the literature.

Additionally, this study would have benefited greatly from the inclusion of measures to assess contributors to parenting at multiple levels of analysis. Stress-reactivity likely plays a significant role in how parents engage with their children during the experience of living in a homeless shelter. Likewise, neurocognitive functioning was not examined in this study, and would add a great deal to our understanding of parenting behavior. Parents' executive functions, and their abilities to use those functions in the context of family disruption are likely significant contributors to parenting behavior in times of crisis. Furthermore, the collection of genetic and epigenetic data would allow for a greater depth of understanding of parenting behaviors, and may provide a potential avenue to further explore the mechanisms and processes behind observed relationships.

### **Future Directions**

This study serves as an important early step in understanding factors that contribute to parenting in the context of homelessness, and could serve as a starting place for future work aimed at better understanding predictors of parenting in high risk

contexts. Future studies should first seek to achieve a more clear structural model of parenting behavior. Given the volume of work that has been done on parenting, there is a noticeable lack of consensus on what aspects of parenting are most important for child outcomes in any particular context. The broader field would likely benefit from a more shared understanding of what factors constitute effective parenting.

To better understand the most efficient and maximally beneficial avenues for intervention, it will be important to better understand the substructures of parenting, which can then serve as targets of focused intervention. Subsequently, future studies could further elucidate factors that contribute to such substructures, and more easily identify malleable and nonmalleable determinants. Given the relatively short amount of time that families are in shelter, and the extreme difficulties with staying in contact with highly mobile families over the long term, a better understanding of those malleable factors that could maximally support effective parenting in the most efficient way possible.

Perhaps the most daunting challenge for future researchers will be to innovate through the use of longitudinal designs. Having multiple data points across time would allow for a better understanding of the overall direction of the relationships between parent experiences and parenting behavior. Furthermore, the use of a longitudinal study design would allow for a better understanding of the processes and mechanisms by which parenting behavior is impacted by experiences of adversity, and the subsequent implications for child development.

While the current study was focused primarily on psychosocial factors that impact parenting, future studies should make concerted efforts to include of measures to assess contributors to parenting at multiple levels of analysis. Stress-reactivity and the stress system likely play a significant role in how parents engage with their children during the experience of living in a homeless shelter, and may impact the efficacy of any intervention and prevention efforts. While limited work has examined the relationship between stress reactivity and parenting, it was found that a pattern of increasing maternal cortisol, an important stress hormone, during a laboratory session was positively related to the use of harsh control practices (e.g., spanking) with young children (Martorell & Bugental, 2006). Mills-Koonce and colleagues (2009) found a clear relationship in which higher cortisol was positively associated with negative and intrusive parenting behaviors; however, it was also found that parents displayed more negative intrusiveness if they had elevated cortisol as well as inhibited vagal tone (indicating increased cardiac reactivity; Mills-Koonce et al., 2009). Thus, patterns of stress response in parents, may provide important information on the targeting intervention and prevention efforts. Highly reactive parents might find most immediate benefit from efforts focused on stress and stress coping, whereas other parents might maximally benefit from efforts directed elsewhere.

Likewise, neurocognitive functioning was not examined in this study, and would add a great deal to our understanding of parenting behavior. Parents' executive functions, including their abilities to self-regulate, and inhibit prepotent responses is undoubtedly important for effective parenting. Evidence suggests that the neural regions responsible

for executive functions are particularly susceptible to acute and chronic stress, with both leading to impair executive abilities (McEwen, 2004). Furthermore, a growing body of evidence suggests that executive functioning abilities are malleable and, because of their wide reaching effects, are an ideal target of intervention and prevention efforts (e.g., Paschall & Fishbein, 2002).

### **Conclusion and Implications**

In summary, this study of parenting in the context of homelessness found mixed support for the hypotheses, while illustrating the complex nature of parenting. Measurement of parenting using multiple observational techniques yielded two distinct but related constructs that underlie parenting quality, Warmth and Structure and Harshness and Negativity. Examination of the predictors of parenting using a path analysis approach suggested that adversity experienced before age 18 and currently available resources may have direct impacts on parenting quality, though in unexpected ways. Lastly, using a person centered approach, this study found that parents who are doing exceedingly well, despite experiencing a potentially destabilizing stressor tend to have higher educational and social resources, and fewer mental health symptoms.

One of the most salient implications from this study highlights a consistent and common refrain among developmental scientists: early experiences matter. While many more questions have been uncovered and should be addressed, the finding that adversity in childhood may have *positive* effects during crisis later in life suggests that more work needs to be done examining how early experiences may or may not provide unanticipated

benefits when families experience major disruptions later in life, like the experience of homelessness.

Results of this study need replication with larger, longitudinal studies.

Furthermore, future research should include measures of parent functioning across multiple levels of analysis. Should the findings replicate, given knowledge that available resources are a significant predictor of parent warmth and structure during crisis, intervention efforts might further explore ways to provide a range of support for families in need. Likewise, the strong relationship between warmth and structure, child behavior, and harshness and negativity all provide possible avenues for helping promote resilience in the face of significant adversity. Given the dynamic, interactional, and developmental nature of parenting, intervening on any one of these points might have a lasting impact on parenting and ultimately on child outcomes.

Table 1  
Rates of Endorsement for Historic Adversity Variables

Measure	Item	n	% Endorsed	
LTEp	Death of a parent	19	13.8	
	Death of a child	1	0.7	
	Death of a brother or sister	6	4.3	
	Death of another close or important family member	40	29.0	
	Divorce or separation of your parents	42	30.4	
	Lost contact with a parent	46	33.3	
	Parent hospitalized for drugs or alcohol	9	6.5	
	Parent hospitalized for mental illness or emotional problem	7	5.1	
	Parent hospitalized for a physical illness	14	10.1	
	You were convicted of a crime	7	5.1	
	You were incarcerated in a juvenile or adult facility	16	11.6	
	You lived in a foster home	27	19.6	
	You were hospitalized for a problem with drugs or alcohol	3	2.2	
	You were hospitalized for a mental illness or emotional problem	10	7.2	
	You were hospitalized for a physical problem	14	10.1	
	You developed a handicap or disability	11	8.0	
	You were a victim of violence	28	20.3	
	You were homeless or lived in an emergency shelter	21	15.2	
	Pint	As a child or youth, did your parents ever neglect to provide you with food, shelter, or medical care, or leave you unsupervised for long periods of time when you were too young to be on your own?	24	17.4

Table 2  
Rates of Endorsement of Recent Adversity Variables

Measure	Item	n	% Endorsed		
LEQ	Child was a victim of violence	2	1.4		
	Child's friend died	3	2.2		
	Family financial difficulty	117	84.8		
	Family had government funds cutoff	47	34.1		
	Family Evicted	53	38.4		
	Many arguments in family	43	31.2		
	Pint	Previous neighborhood unsafe	90	65.2	
		Feel child needs services that he/she hasn't received	23	16.7	
		Currently unemployed	117	84.8	
		Could not find place could afford rent	66	47.8	
Rise in rent		17	12.3		
Housing damaged by fire or disaster		1	.7		
Fired from job		20	14.5		
Laid off from job		20	14.5		
Relationship problems		32	23.3		
Battering, abusive relationship		21	15.2		
Left by person supporting you	10	7.2			
Substandard or unsafe housing	24	17.4			
Drinking or drug problem you had	1	.7			
Drinking or drug problem of someone else living with you	9	6.5			
		M(SD)	Min	Max	
Food Insecurity	Food Insecurity Score	1.45(1.86)	0	7	

Table 3  
Descriptive Statistics for Mental Health Symptoms

Measure	Variable	M(SD)	Min	Max
HCL-25	Total Score	1.77(.62)	1	3.6
PCL-C	Trauma Severity Score	33.58(14.87)	17	83
PBR	Sad Mood	2.76(1.20)	1	5
Pint	Rate your overall mental or emotional health	3.04(1.15)	1	5
LEQ	Rate how stressful the past year has been for you	4.06(1.19)	1	5

Table 4  
Descriptive Statistics and Endorsement Rates for Resource

Construct	Measure	Variable	M(SD)	Min	Max
Cognitive Resources	PBR	Difficulty Tracking	2.13(1.21)	1	5
		Clarity of Expression	3.80(0.92)	2	5
		Estimated Intellectual Ability	2.82(0.70)	1	4
	Pint	Highest Degree	0.88(.84)	0	4
Physical Health	PBR	General Healthiness	3.67(0.94)	2	5
	Pint	Rate your overall physical health	3.21(1.25)	1	5
Agreeableness	PBR	Social Ease	3.95(0.99)	1	5
		Eye Contact	3.55(1.04)	1	5
		Ease of Rapport	4.10(0.99)	1	5
		Friendly	4.20(0.85)	2	5
		Appropriate Smile and Laughter	3.67(0.91)	1	5
		Likeability	4.07(0.91)	1	5
Social Support	Pint	Get along with child's other parent	0.69(0.33)	0	1
		Contact with family	0.94(0.19)	0	1
			n	% Endorsed	
Another adult staying in shelter			37	26.8	

Table 5  
Descriptive Statistics for Composites

Composite	# of items	$\alpha$	M(SD)	Min	Max
Historic Adversity	20		2.57(2.40)	0	14
Recent Adversity	21		5.09(2.23)	0	10.5
Mental Health Symptoms	6	0.85	0.01(0.77)	-1.64	2.09
Resources	4	0.56	0.00(0.67)	-1.70	1.63
Cognitive Resources	4	0.73	0.00(0.83)	-1.96	2.67
Physical Health	2	0.53	-0.01(0.83)	-1.78	1.42
Agreeableness	6	0.91	0.00(0.83)	-2.38	1.14
Social Support	3		1.78(.69)	0	3

Table 6  
Parenting Quality Descriptive Statistics

*Measures of Parenting Quality*

	Variable	M(SD)	Min	Max
Coder Impressions of Family Interaction Tasks				
	Problem Solving	2.04(.63)	1.19	4.47
	Positive Involvement	2.79(.52)	1.39	3.83
	Skill Encouragement	2.93(.66)	1.43	4.68
	Inept Discipline	2.20(.40)	1.42	3.05
Global Coding				
	Positive Responsiveness	3.53(.92)	1	5
	Warmth	3.25(1.06)	0	5
	Harshness/Hostility	2.27(.77)	1	5
	Negativity	1.53(1.07)	0	5
	Quality of Assistance	3.54(.83)	2	5
	Support of Autonomy	3.47(.88)	1	5
	Structure and Limit Setting	3.73(.99)	1	5
State Space Grid Coding				
	Positive Control	.42(.12)	.15	.74
	Disengaged/Distracted	.13(.08)	.00	.46
	Negative Control	.10(.08)	.00	.40

Table 7  
Descriptive Statistics for Control Variables

Variable	M(SD)	Min	Max
Age	30.23(6.32)	20.00	57.00
Child On-Task Behavior Duration	0.60(0.15)	0.19	0.91

Sex		n	%
	Male	6	4.3
	Female	132	95.7

Table 8  
Intercorrelations of Parenting Quality Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. PS	-												
2. PI	.68**	-											
3. SE	.51**	.74**	-										
4. ID	-.63**	-.72**	-.66**	-									
5. PPR	.43**	.67**	.54**	-.48**	-								
6. W	.39**	.62**	.48**	-.49**	.76**	-							
7. HH	-.26**	-.46**	-.27**	.43**	-.64**	-.51**	-						
8. Neg	-.27**	-.42**	-.26**	.49**	-.58**	-.49**	.77**	-					
9. QoA	.53**	.69**	.65**	-.58**	.79**	.74**	-.49**	-.48**	-				
10. SoA	.47**	.69**	.56**	-.56**	.80**	.69**	-.66**	-.61**	.74**	-			
11. SaLS	.48**	.48**	.47**	-.58**	.52**	.46**	-.34**	-.42**	.67**	.53**	-		
12. PosC	.53**	.69**	.55**	-.47**	.61**	.50**	-.39**	-.36**	.64**	.58**	.49**	-	
13. D/D	-.48**	-.67**	-.59**	.38**	-.61**	-.52**	.30**	.21*	-.60**	-.60**	-.40**	-.64**	-
14. NegC	-.20*	-.35**	-.21*	.45*	-.37*	-.36*	.64**	.67*	-.41**	-.47**	-.32**	-.49**	.07

Note: PS = Problem Solving, PI = Positive Involvement, SE = Skill Encouragement, ID = Inept Discipline, PPR = Parent Positive Responsiveness, W = Warmth, HH = Harshness/Hostility, Neg = Negativity, QoA = Quality of Assistance, SoA = Support of Autonomy, SaLS = Structure and Limit Setting, PosC = Positive Control, D/D = Distracted/Disengaged, NegC = Negative Control  
\* p > .05, \*\*p > .01

Table 9  
 Factor loadings and communalities based on a maximum likelihood analysis with direct oblimin rotation for 14 parenting quality measures

Variable	Factor 1	Factor 2	Communalities
Coder Impressions of Family Interaction Tasks			
Problem Solving	.73	.11	.47
Positive Involvement	.87	-.01	.78
Skill Encouragement	.87	.17	.64
Inept Discipline	-.63	.16	.52
Global Coding			
Positive Responsiveness	.61	-.37	.74
Warmth	.58	-.29	.59
Harshness/Hostility	-.06	.85	.78
Negativity	-.02	.86	.76
Quality of Assistance	.76	-.18	.74
Support of Autonomy	.58	-.42	.76
Structure and Limit Setting	.56	-.15	.41
State Space Grid Coding			
Positive Control	.71	-.07	.56
Disengaged/Distracted	-.83	-.15	.59
Negative Control	-.01	.70	.50

Table 10  
Descriptive Statistics for Parenting Quality Composites

Composite	# of items	$\alpha$	M(SD)	Min	Max
Warmth and Structure	11	0.94	-0.01(0.79)	-2.00	1.60
Harshness and Negativity	3	0.87	0.00(0.89)	-1.44	3.42

Table 11  
Bivariate Correlations Among Path Analysis Composites

	1	2	3	4	5	6
1. Historic Adversity	-					
2. Recent Adversity	.27**	-				
3. Mental Health Functioning	.16	.33**	-			
4. Resources	.11	.03	-.34**	-		
5. Child On-Task Behavior	-.02	-.06	-.12	.19*	-	
6. Warmth and Structure	.24**	.09	-.04	.40**	.43**	-
7. Harshness and Negativity	-.12	.01	.16	-.21*	-.46**	-.58**

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

Table 12  
Path Estimates

		B	SE B	$\beta$	Z	p
Warmth & Structure						
	Child On-Task Behavior	1.98	.38	.38	5.16	.00
	Historic Adversity	.06	.02	.19	2.54	.01
	Recent Adversity	.01	.03	.03	.35	.72
	Mental Health	.07	.09	.07	.78	.44
	Resources	.40	.10	.34	4.11	.00
Harshness & Negativity						
	Child On-Task Behavior	-2.61	.46	-.45	-5.66	.00
	Historic Adversity	-.05	.03	-.13	-1.68	.09
	Recent Adversity	.00	.03	-.01	-.11	.91
	Mental Health	.13	.10	.11	1.22	.22
	Resources	-.11	.12	-.08	-.90	.37
Recent Adversity						
	Historic Adversity	.25	.07	.27	3.32	.00
Mental Health						
	Historic Adversity	.05	.03	.16	1.89	.05
Resources						
	Historic Adversity	.03	.02	.11	1.29	.20

$X^2 = 18.38$ ,  $df=14$ ,  $p=.19$ ;  $RMSEA=.05$ ;  $CFI=.97$ ;  $TLI=.93$

Table 13  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Cognitive Resources, Social Support, Agreeableness, Physical Health, Historic Adversity, Early Adversity, and Mental Health Difficulties

<i>Predictors of Warmth and Structure</i>						
	Variable	B	SE B	$\beta$	$R^2$	$\Delta R^2$
Step 1						
	Parent Sex	.07	.35	.02		
	Parent Age	.08	.07	.10	.01	
Step 2						
	Parent Sex	.05	.32	.01		
	Parent Age	.06	.07	.08		
	Cognitive Resources	.16	.07	.20	*	
	Social Support	.04	.07	.05		
	Agreeableness	.18	.07	.23	*	
	Physical Health	.07	.07	.09	.18	.18 **
Step 3						
	Parent Sex	.14	.33	.04		
	Parent Age	.07	.07	.09		
	Cognitive Resources	.14	.07	.18		
	Social Support	.02	.07	.02		
	Agreeableness	.16	.08	.20	*	
	Physical Health	.12	.08	.16		
	Historic Adversity	.16	.07	.21	*	
	Recent Adversity	-.02	.07	-.03		
	Mental Health	.02	.08	.003	.22	.04

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

Table 14  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Cognitive Resources, Social Support, Agreeableness, Physical Health, Historic Adversity, Early Adversity, and Mental Health Difficulties

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.01	.08	.01	.00	
Step 2					
Parent Sex	.09	.40	.02		
Parent Age	-.02	.09	-.02		
Cognitive Resources	-.08	.09	-.09		
Social Support	-.13	.08	-.14		
Agreeableness	.00	.09	.01		
Physical Health	-.10	.09	-.11	.05	.05
Step 3					
Parent Sex	-.03	.41	-.01		
Parent Age	-.03	.09	-.03		
Cognitive Resources	-.07	.09	-.08		
Social Support	-.09	.08	-.10		
Agreeableness	.01	.09	.01		
Physical Health	-.07	.10	-.08		
Historic Adversity	-.11	.09	-.12		
Recent Adversity	.00	.09	.00		
Mental Health	.10	.10	.11	.07	.02

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

Table 15  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Resources,  
 Historic Adversity, and Historic Adversity X Resources

<i>Predictors of Warmth and Structure</i>							
	Variable	B	SE B	$\beta$		R <sup>2</sup>	$\Delta R^2$
Step 1							
	Parent Sex	.07	.34	.02			
	Parent Age	.08	.07	.10		.09	
Step 2							
	Parent Sex	-.01	.32	.00			
	Parent Age	.09	.07	.12			
	Resources	.32	.06	.40	**	.17	.16 **
Step 3							
	Parent Sex	.04	.32	.01			
	Parent Age	.09	.07	.12			
	Resources	.30	.06	.38	**		
	Historic Adversity	.15	.06	.19	*	.21	.04 *
Step 4							
	Parent Sex	.03	.32	.01			
	Parent Age	.09	.07	.11			
	Resources	.30	.06	.38	**		
	Historic Adversity	.16	.07	.20	*		
	Historic Adversity X Resources	-.02	.04	-.03		.21	.00

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

Table 16  
Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Cognitive Resources, Historic Adversity, and Historic Adversity X Cognitive Resources

*Predictors of Warmth and Structure*

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Variable	B	SE B	$\beta$		R <sup>2</sup>	$\Delta R^2$	
Step 1							
Parent Sex	.07	.35	.02				
Parent Age	.01	.01	.10		.01		
Step 2							
Parent Sex	.06	.33	.02				
Parent Age	.01	.01	.06				
Cognitive Resources	.27	.07	.34	**	.12	.12	**
Step 3							
Parent Sex	.11	.33	.03				
Parent Age	.01	.01	.06				
Cognitive Resources	.25	.07	.32	**			
Historic Adversity	.07	.03	.20	*	.16	.04	*
Step 4							
Parent Sex	.09	.33	.02				
Parent Age	.01	.01	.06				
Cognitive Resources	.26	.07	.32	**			
Historic Adversity	.07	.03	.22	*			
Historic Adversity X Cognitive Resources	-.03	.04	-.07		.17	.01	

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

Table 17  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Social Support, Historic Adversity, and Historic Adversity X Social Support

<i>Predictors of Warmth and Structure</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.07	.35	.02		
	Parent Age	.01	.01	.10	.01	
Step 2						
	Parent Sex	.01	.35	.00		
	Parent Age	.01	.01	.11		
	Social Support	.09	.07	.11	.02	.01
Step 3						
	Parent Sex	.09	.35	.02		
	Parent Age	.01	.01	.10		
	Social Support	.06	.07	.08		
	Historic Adversity	.07	.03	.22 *	.07	.05 *
Step 4						
	Parent Sex	.09	.35	.02		
	Parent Age	.01	.01	.10		
	Social Support	.06	.07	.08		
	Historic Adversity	.07	.03	.22 *		
	Historic Adversity X Social Support	.00	.04	.00	.07	.00

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

Table 18  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Resources,  
 Recent Adversity, and Recent Adversity X Resources

*Predictors of Warmth and Structure*

Variable	B	SE B	$\beta$	$R^2$	$\Delta R^2$
Step 1					
Parent Sex	.07	.35	.02		
Parent Age	.08	.07	.10	.01	
Step 2					
Parent Sex	-.01	.32	.00		
Parent Age	.09	.07	.12		
Resources	.32	.06	.41 **	.17	.16 **
Step 3					
Parent Sex	-.04	.32	-.01		
Parent Age	.08	.07	.11		
Resources	.32	.06	.40 **		
Recent Adversity	.05	.07	.06	.18	.01
Step 4					
Parent Sex	-.03	.33	-.01		
Parent Age	.08	.07	.10		
Resources	.32	.06	.40 **		
Recent Adversity	.05	.07	.07		
Recent Adversity X Resources	-.01	.05	-.03	.18	.00

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

Table 19  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Cognitive Resources, Recent Adversity, and Recent Adversity X Cognitive Resources

*Predictors of Warmth and Structure*

Variable	B	SE B	$\beta$	$R^2$	$\Delta R^2$
Step 1					
Parent Sex	.07	.35	.02		
Parent Age	.01	.01	.10	.01	
Step 2					
Parent Sex	.06	.33	.02		
Parent Age	.01	.01	.06		
Cognitive Resources	.27	.07	.34 **	.12	.12 **
Step 3					
Parent Sex	.03	.33	.01		
Parent Age	.01	.01	.05		
Cognitive Resources	.27	.07	.34 **		
Recent Adversity	.05	.07	.07	.13	.01
Step 4					
Parent Sex	.00	.33	.00		
Parent Age	.00	.01	.03		
Cognitive Resources	.27	.07	.35 **		
Recent Adversity	.05	.07	.06		
Recent Adversity X Cognitive Resources	-.04	.03	-.11	.14	.01

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

Table 20  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Social Support, Recent Adversity, and Recent Adversity X Social Support

<i>Predictors of Warmth and Structure</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.07	.35	.02		
	Parent Age	.01	.01	.10	.01	
Step 2						
	Parent Sex	.01	.35	.00		
	Parent Age	.01	.01	.11		
	Social Support	.09	.07	.11	.02	.01
Step 3						
	Parent Sex	-.03	.36	-.01		
	Parent Age	.01	.01	.09		
	Social Support	.10	.07	.12		
	Recent Adversity	.07	.07	.09	.03	.01
Step 4						
	Parent Sex	-.03	.36	-.01		
	Parent Age	.01	.01	.10		
	Social Support	.10	.07	.13		
	Recent Adversity	.07	.07	.09		
	Recent Adversity X Social Support	-.04	.05	-.08	.03	.00

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

Table 21  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Resources,  
 Mental Health, and Mental Health X Resources

<i>Predictors of Harshness and Negativity</i>						
Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$	
Step 1						
Parent Sex	.04	.40	.01			
Parent Age	.01	.08	.01	.00		
Step 2						
Parent Sex	.08	.39	.02			
Parent Age	.00	.08	.00			
Resources	-.19	.08	-.21 *	.04	.04	*
Step 3						
Parent Sex	.02	.40	.00			
Parent Age	-.01	.08	-.01			
Resources	-.16	.08	-.17			
Mental Health	.09	.08	.10	.05	.01	
Step 4						
Parent Sex	.02	.40	.01			
Parent Age	-.02	.08	-.02			
Resources	-.14	.08	-.16			
Mental Health	.09	.08	.10			
Mental Health X Resources	-.14	.16	-.08	.06	.01	

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

Table 22  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Social Support, Mental Health, and Mental Health X Social Support

<i>Predictors of Harshness and Negativity</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.01	.01	.00	
Step 2						
	Parent Sex	.13	.40	.03		
	Parent Age	.00	.01	-.01		
	Social Support	-.15	.08	-.17	.03	.03
Step 3						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.01	-.03		
	Social Support	-.12	.08	-.14		
	Mental Health	.12	.08	.13	.04	.01
Step 4						
	Parent Sex	.02	.40	.01		
	Parent Age	.00	.01	-.03		
	Social Support	-.13	.08	-.15		
	Mental Health	.12	.08	.13		
	Mental Health X Social Support	.12	.13	.08	.05	.01

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

Table 23  
Results of Person-Centered Analyses

Item	Parenting		<i>t</i>		<i>d</i>
	Resilient	Maladaptive			
Cognitive/Intellectual					
Completed Years of School	12.14	11.10	-2.21	*	.64
Estimated Intellectual Ability	2.60	3.03	-1.95	+	.57
Social					
Social Ease	4.24	3.35	-3.73	*	1.08
Rapport Easily Established	4.34	3.85	-1.87	+	.54
Gets Along with Other Parent	.76	.73	-.25		
Friendliness	4.31	3.85	-1.43		
Mental Health Symptoms					
Depression	1.89	2.30	2.02	*	.59
Trauma Symptoms	33.86	41.15	1.69	+	.49
Anxiety	1.51	1.72	1.19		
Past Year Stress	4.21	4.45	.78		

Note: <sup>+</sup>p<.10, \*p<.05

Figure 1  
Conceptual Model

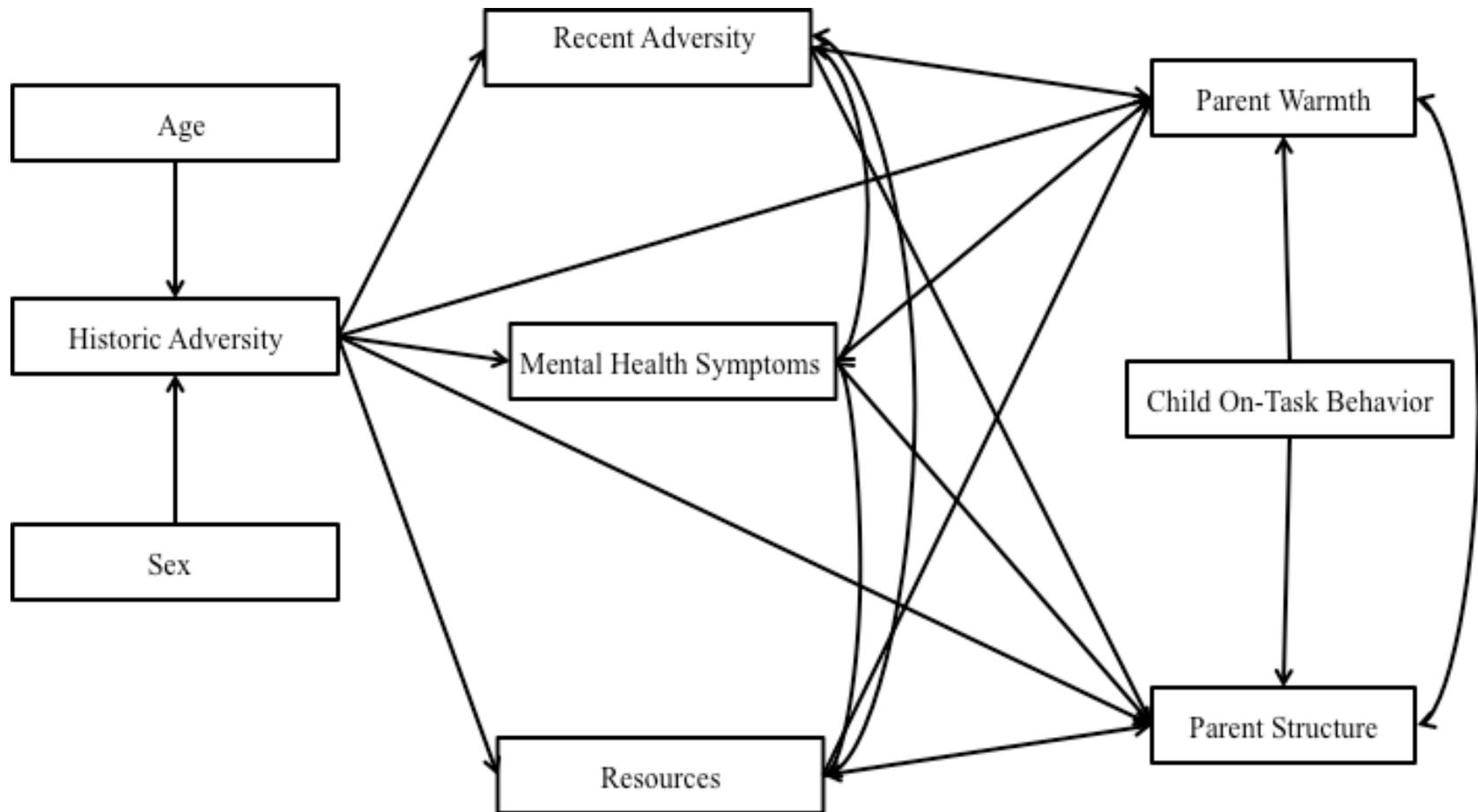
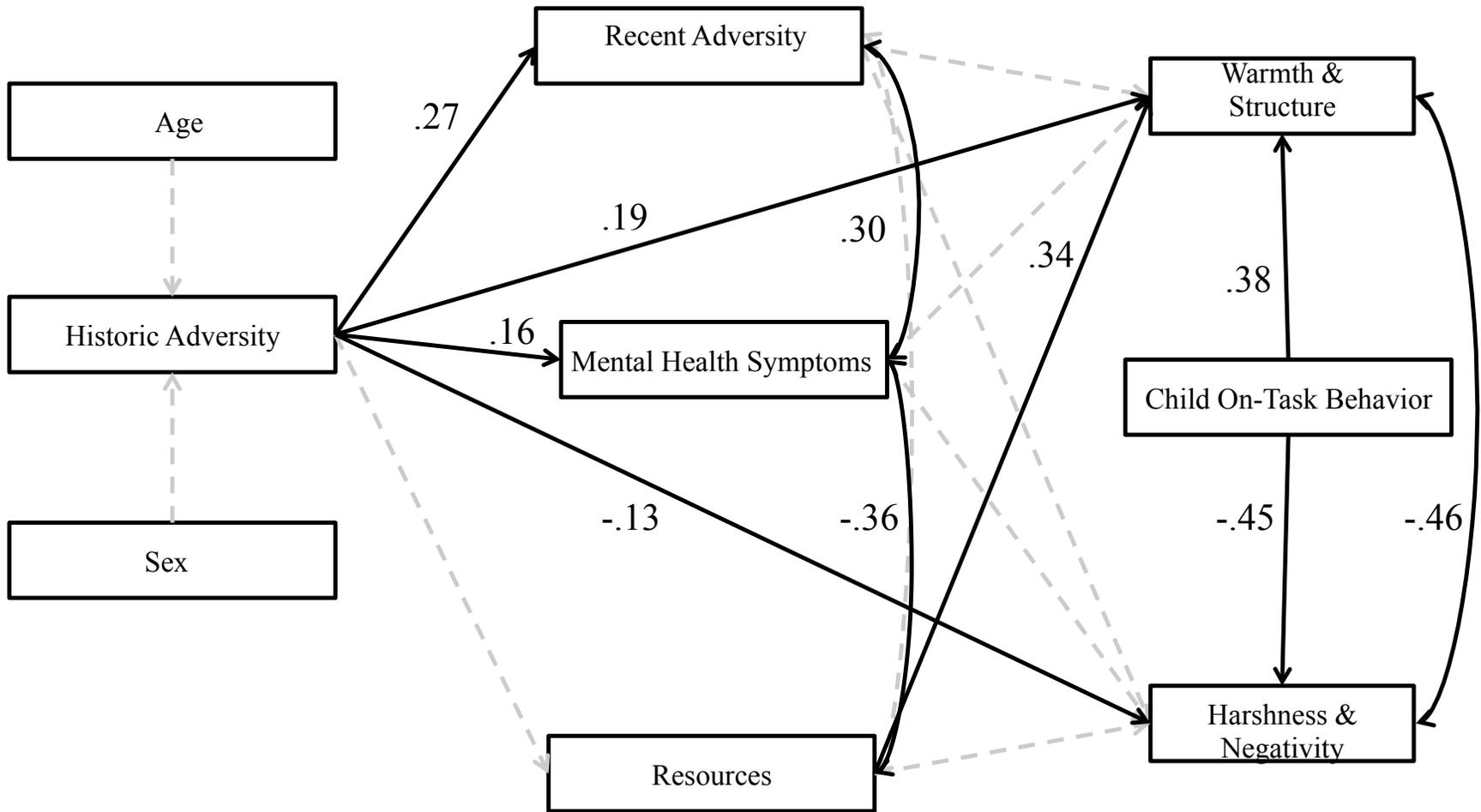


Figure 2  
 Path Diagram of Predictors of Parenting Quality  
 $X^2 = 18.38, df=14, p=.19; CFI = .97; TLI = .93; RMSEA = .05.$



## References

- Abidin, R. R. (1992). The determinants of parenting behavior. *Journal of clinical child psychology, 21*(4), 407-412.
- Adam, E. K., & Chase-Lansdale, P. L. (2002). Home sweet home(s): parental separations, residential moves, and adjustment problems in low-income adolescent girls. *Developmental psychology, 38*(5), 792.
- Ainsworth, M. D. S., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of Attachment*. Hillsdale, NJ: Erlbaum.
- Anderson, K. E., Lytton, H., & Romney, D. M. (1986). Mothers' interactions with normal and conduct-disordered boys: Who affects whom?. *Developmental Psychology, 22*(5), 604.
- Andresen, P. A., & Telleen, S. L. (1992). The relationship between social support and maternal behaviors and attitudes: A meta-analytic review. *American Journal of Community Psychology, 20*(6), 753-774.
- Aviezer, O., Sagi, A., Joels, T., & Ziv, Y. (1999). Emotional availability and attachment representations in kibbutz infants and their mothers. *Developmental Psychology, 35*(3), 811.
- Barkley, R. A. (1989). Hyperactive girls and boys: Stimulant drug effects on mother-child interactions. *Journal of Child Psychology and Psychiatry, 30*(3), 379-390.
- Baumrind, D. (1973). The development of instrument competence through socialization. In A. D. Pick (Ed.) *Minnesota Symposium on Child Psychology* (Vol. 7, pp. 3-46). Minneapolis: University of Minnesota Press.

- Belle, D. (1990). Poverty and women's mental health. *American Psychologist*, *45*, 385-389.
- Belsky, J. (2011). The determinants of parenting in GxE Perspective: a case of differential susceptibility?. In *Biosocial Foundations of Family Processes* (pp. 61-68). Springer New York.
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development* *55*(1), 83-96.
- Belsky, J., Crnic, K., & Woodworth, S. (1995). Personality and parenting: Exploring the mediating role of transient mood and daily hassles. *Journal of personality*, *63*(4), 905-929.
- Belsky, J., & Jaffee, S. R. (2006). The multiple determinants of parenting. In D. Cicchetti & D. Cohen (eds.), *Developmental Psychopathology Volume 3: Risk Disorder and Adaptation (2<sup>nd</sup> ed.)*. Wiley: Hoboken, NJ.
- Belsky, J., Woodworth, S., & Crnic, K. (1996a). Trouble in the second year: Three questions about family interaction. *Child Development*, *67*, 556-578.
- Belsky, J., Woodworth, S., & Crnic, K. (1996b). Troubled family interaction during toddlerhood. *Development and Psychopathology*, *8*, 477-495.
- Bishop, S. J., & Leadbeater, B. J. (1999). Maternal social support patterns and child maltreatment: Comparison of maltreating and nonmaltreating mothers. *American Journal of Orthopsychiatry*, *69*(2), 172-181.

- Blacher, J., Baker, B. L., & Kaladjian, A. (2013). Syndrome Specificity and Mother–Child Interactions: Examining Positive and Negative Parenting Across Contexts and Time. *Journal of autism and developmental disorders*, 43(4), 761-774.
- Bowlby, J. (1969/1982). *Attachment and loss* (Vol 1), 2nd ed. New York: Basic.
- Bowlby, J. (1973). *Attachment and loss* (Vol 2), New York: Basic.
- Bowlby, J. (1980). *Attachment and loss: Loss, sadness and depression* (Vol. 3). New York: Basic.
- Bowlby, J. (1988). *A secure base*. New York: Basic.
- Bowlby, J. (1985). The role of childhood experience in cognitive disturbance. In *Cognition and psychotherapy* (pp. 181-200). Springer US.
- Bradley, R. H. (1993). Maternal IQ, the Home Environment, and Child IQ in Low Birthweight, Premature Children. *International Journal of Behavioral Development*, 16(1), 61-74.
- Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the society for research in child development*, 3-35.
- Bretherton, I. (1990). Communication patterns, internal working models, and the intergenerational transmission of attachment relationships. *Infant Mental Health Journal*, 11(3), 237-252.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by design and nature*.

- Buckner, J. C. (2008). Understanding the Impact of Homelessness on Children Challenges and Future Research Directions. *American Behavioral Scientist, 51*(6), 721-736.
- Buckner, J. C., & Bassuk, E. L. (1997). Mental disorders and service utilization among youths from homeless and low-income housed families. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(7), 890-900.
- Buckner, J. C., Bassuk, E. L., & Weinreb, L. F. (2001). Predictors of academic achievement among homeless and low-income housed children. *Journal of School Psychology, 39*, 45-69.
- Burchinal, M. R., Follmer, A., & Bryant, D. M. (1996). The relations of maternal social support and family structure with maternal responsiveness and child outcomes among African American families. *Developmental Psychology, 32*(6), 1073.
- Caspi A., Moffitt, T. E., Morgan, J., Rutter, M, Taylor, A. Arseneault, L., et al., (2004). Maternal expressed emotion predicts children's antisocial behavior problems: Using monozygotic-twin differences to identify environmental effects on behavioral development. *Developmental Psychology, 40*(2), 149-161.
- Ceballo, R. & McLoyd, V. (2002). Social support and parenting in poor dangerous neighborhoods. *Child Development, 73*, 1310-1321.
- Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: consequences for children's development. *Psychiatry, 56*(1), 96.

- Cicchetti, D., & Rizley, R. (1981). Developmental perspectives on the etiology, intergenerational transmission, and sequelae of child maltreatment. *New Directions for Child and Adolescent Development*, 1981(11), 31-55.
- Clark, L. A., Kochanska, G., & Ready, R. (2000). Mothers' personality and its interaction with child temperament as predictors of parenting behavior. *Journal of personality and social psychology*, 79(2), 274.
- Cohn, J. F., Campbell, S. B., Matias, R., & Hopkins, J. (1990). Face-to-face interactions of postpartum depressed and nondepressed mother-infant pairs at 2 months. *Developmental psychology*, 26(1), 15.
- Coleman, P. K., & Karraker, K. H. (1998). Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*, 18(1), 47-85.
- Conger, R. D., & Conger, K. J. (2002). Resilience in Midwestern families: Selected findings from the first decade of a prospective, longitudinal study. *Journal of Marriage and Family*, 64(2), 361-373.
- Conger, R. D., Conger, K. J., Elder, G. H., Lorenz, F. O., Simons, R. L., & Whitbeck, L. B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child development*, 63(3), 526-541.
- Conger, R. D., Cui, M., Bryant, C. M., & Elder Jr, G. H. (2000). Competence in early adult romantic relationships: a developmental perspective on family influences. *Journal of personality and social psychology*, 79(2), 224.

- Conger, R. D., Lorenz, F. O., Elder, G. H., Melby, J. N., Simons, R. L., & Conger, K. J. (1991). A process model of family economic pressure and early adolescent alcohol use. *The Journal of Early Adolescence, 11*(4), 430-449.
- Conger, R. D., McCarty, J. A., Yang, R. K., Lahey, B. B., & Kropp, J. P. (1984). Perception of child, child-rearing values, and emotional distress as mediating links between environmental stressors and observed maternal behavior. *Child development, 2234-2247*.
- Costello, A. B., & Osborne, J. W. (2011). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment and Research Evaluation, 10*, (7).
- Crnic, K. A., & Greenberg, M. T. (1990). Minor parenting stresses with young children. *Child development, 61*(5), 1628-1637.
- Crnic, K.A. & Low, C. (2002). Everyday Stresses and parenting. In M. Bornstein (Ed.), *Handbook of Parenting, Vol. 4, (2nd Edition)* Hillsdale, NJ: Erlbaum (pp. 243-268).
- Crowell, J. A., & Feldman, S. S. (1988). Mothers' internal models of relationships and children's behavioral and developmental status: A study of mother-child interaction. *Child development, 1273-1285*.
- Crowell, J. A., & Feldman, S. S. (1989). Assessment of mothers' working models of relationships: Some clinical implications. *Infant Mental Health Journal, 10*(3), 173-184.

- Cutuli, J. J., Desjardins, C. D., Herbers, J. E., Long, J. D., Heistad, D., Chan, C.-K., Hinz, E., et al. (2013). Academic achievement trajectories of homeless and highly mobile students: resilience in the context of chronic and acute risk. *Child development, 84*(3), 841–57. doi:10.1111/cdev.12013
- DeGarmo, D. S., Patterson, G. R., & Forgatch, M. S. (2004). How do outcomes in a specified parenting training intervention maintain or wane over time? *Prevention Science, 5*, 73-89.
- De Wolff, M. S., & Ijzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child development, 68*(4), 571-591.
- Egeland, B., Jacobvitz, D., & Papatola, K. (1987). Intergenerational continuity of abuse. In R. Gelles & J. Lancaster (Eds.) *Child Abuse and Neglect: Biosocial Dimensions* (pp. 255-276). New York: Aldine.
- Elder, G. H., Conger, R. D., Foster, E. M., & Ardelt, M. (1992). Families under economic pressure. *Journal of Family Issues, 13*(1), 5-37.
- Ellingsen, R., Baker, B. L., Blacher, J., & Crnic, K. (2014). Resilient parenting of children at developmental risk across middle childhood. *Research in developmental disabilities, 35*(6), 1364-1374.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling, 8*(3), 430-457.

- Ensel, W. M., & Lin, N. (1991). The life stress paradigm and psychological distress. *Journal of Health and Social Behavior*, 321-341.
- Éthier, L. S., Lacharité, C., & Couture, G. (1995). Childhood adversity, parental stress, and depression of negligent mothers. *Child Abuse & Neglect*, 19(5), 619-632.
- Evans, S., Shipton, E. A., & Keenan, T. (2006). The relationship between maternal chronic pain and child adjustment: The role of parenting as a mediator. *The Journal of Pain*, 7(4), 236-243.
- Field, T., Healy, B. T., Goldstein, S., & Guthertz, M. (1990). Behavior-state matching and synchrony in mother-infant interactions of nondepressed versus depressed dyads. *Developmental psychology*, 26(1), 7.
- Forgatch, M. S., Bullock, B. M., & Patterson, G. R. (2004). From theory to practice: Increasing effective parenting through role-play: The Oregon model of parent management training (PMTO). In H. Steiner, (Eds.), *Handbook of mental health interventions in children and adolescents: An integrated developmental approach*. (pp. 782– 812). San Francisco: Jossey-Bass.
- Forgatch, M. S., & DeGarmo, D. S. (1999). Parenting through change: An effective prevention program for single mothers. *Journal of consulting and clinical psychology*, 67(5), 711.
- Forgatch, M. S., & DeGarmo, D. S. (2002). Extending and testing the social interaction learning model with divorce samples. In J. B. Reid, R. G. Patterson, & J. J. Snyder (Eds.), *Antisocial behavior in children and adolescents: A developmental*

analysis and model for intervention ( pp. 235–256). Washington, DC: American Psychological Association.

Forgatch, M. S., & Patterson, G. R. (2010). Parent Management Training—Oregon Model: An intervention for antisocial behavior in children and adolescents. *Evidence-based psychotherapies for children and adolescents*, 2, 159-178.

Forgatch, M. S., Patterson, G. R., Degarmo, D. S., & Beldavs, Z. G. (2009). Testing the Oregon delinquency model with 9-year follow-up of the Oregon Divorce Study. *Development and psychopathology*, 21(02), 637-660.

Forgatch, M. S., Plowman, E. J., Gewirtz, A. H., & Stubbs, J. (2010). *Observed family interaction code training manual (Unpublished manual.)*. Minneapolis, MN: University of Minnesota.

Fox, R. A., Platz, D. L., & Bentley, K. S. (1995). Maternal factors related to parenting practices, developmental expectations, and perceptions of child behavior problems. *The Journal of Genetic Psychology*, 156(4), 431-441.

Garnezy, N. (1974). Children at risk: The search for the antecedents of schizophrenia: II. Ongoing research programs, issues, and intervention. *Schizophrenia Bulletin*, 1(9), 55.

George, C., & Solomon, J. (1996). Representational models of relationships: Links between caregiving and attachment. *Infant Mental Health Journal*, 17(3), 198-216.

- Gewirtz, A. H., DeGarmo, D. S., Plowman, E. J., August, G., & Realmuto, G. (2009). Parenting, parental mental health, and child functioning in families residing in supportive housing. *American Journal of Orthopsychiatry*, 79, 336-347.
- Gewirtz, A., Forgatch, M., & Wieling, E. (2008). Parenting practices as potential mechanisms for child adjustment following mass trauma. *Journal of Marital and Family Therapy*, 34(2), 177-192.
- Glass R. M., Allan T., Uhlenhut E. H., Kimball C. P., Borinstein D. I. (1978). Psychiatric screening in a medical clinic: An evaluation of a self-report inventory. *Archives of General Psychiatry*, 35, 1189-1195.
- Ghazarian, S. R., & Roche, K. M. (2010). Social support and low-income, urban mothers: Longitudinal associations with adolescent delinquency. *Journal of youth and adolescence*, 39(9), 1097-1108.
- Goodman, S. H., & Brumley, H. E. (1990). Schizophrenic and depressed mothers: Relational deficits in parenting. *Developmental Psychology*, 26(1), 31.
- Granic, I., & Patterson, G. R. (2006). Toward a comprehensive model of antisocial development: a dynamic systems approach. *Psychological review*, 113(1), 101.
- Green, B. L., Furrer, C., & McAllister, C. (2007). How do relationships support parenting? Effects of attachment style and social support on parenting behavior in an at-risk population. *American Journal of Community Psychology*, 40(1-2), 96-108.

- Gruman, D. H., Harachi, T. W., Abbott, R. D., Catalano, R. F., & Fleming, C. B. (2008). Longitudinal effects of student mobility on three dimensions of elementary school engagement. *Child development, 79*(6), 1833-1852.
- Haft, W. L., & Slade, A. (1989). Affect attunement and maternal attachment: A pilot study. *Infant Mental Health Journal, 10*(3), 157-172.
- Hashima, P. Y., & Amato, P. R. (1994). Poverty, social support, and parental behavior. *Child development, 65*(2), 394-403.
- Herbers, J. E. (2011). Parent-child relationships in young homeless families: Coregulation as a predictor of child self-regulation and school adjustment. (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, MN.
- Herbers, J. E., Cutuli, J. J., Lafavor, T. L., Vrieze, D., Leibel, C., Obradović, J., & Masten, A. S. (2011). Direct and indirect effects of parenting on academic functioning of young homeless children. *Early Education and Development, 22*, 77-104.
- Herbers, J. E., Cutuli, J. J., Supkoff, L. M., Heistad, D., Chan, C. K., Hinz, E., & Masten, A. S. (2012). Early reading skills and academic achievement trajectories of students facing poverty, homelessness, and high residential mobility. *Educational Researcher, 41*(9), 366-374.
- Herbers, J. E., Cutuli, J. J., Supkoff, L. M., Narayan, A. J., & Masten, A. S. (2014). Parenting and coregulation: Adaptive systems for competence in children experiencing homelessness. *American Journal of Orthopsychiatry, 84*(4), 420.

- Huntington, N., Buckner, J. C., & Bassuk, E. L. (2008). Adaptation in homeless children: An empirical examination using cluster analyses. *American Behavioral Scientist, 51*, 737-755.
- Ingersoll, G. M., Scamman, J. P., & Eckerling, W. D. (1989). Geographic mobility and student achievement in an urban setting. *Educational Evaluation and Policy Analysis, 11*(2), 143-149.
- Jain, A., Belsky, J., & Crnic, K. (1996). Beyond fathering behaviors: Types of dads. *Journal of Family Psychology, 10*(4), 431.
- Karraker, K. H., & Coleman, P. K. (2005). The effects of child characteristics on parenting. *Parenting: An ecological perspective, 147-176*.
- Kelley, S. A., & Jennings, K. D. (2003). Putting the pieces together: Maternal depression, maternal behavior, and toddler helplessness. *Infant Mental Health Journal, 24*(1), 74-90.
- Kochanska, G., Aksan, N., & Nichols, K. E. (2003). Maternal power assertion in discipline and moral discourse contexts: commonalities, differences, and implications for children's moral conduct and cognition. *Developmental Psychology, 39*(6), 949.
- Kochanska, G., Clark, A., & Goldman, M. S. (1997). Implications of mothers' personality for their parenting and their young children's developmental outcomes. *Journal of personality, 65*(2), 387-420.

- Kochanska, G., Kuczynski, L., Radke-Yarrow, M., & Welsh, J. D. (1987). Resolutions of control episodes between well and affectively ill mothers and their young children. *Journal of abnormal child psychology*, *15*(3), 441-456.
- Kyrios, M., & Prior, M. (1990). Temperament, stress and family factors in behavioural adjustment of 3-5-year-old children. *International journal of behavioral development*, *13*(1), 67-93.
- Leinonen, J. A., Solantaus, T. S., & Punamäki, R. L. (2002). The specific mediating paths between economic hardship and the quality of parenting. *International journal of behavioral development*, *26*(5), 423-435.
- Lempers, J. D., Clark-Lempers, D., & Simons, R. L. (1989). Economic hardship, parenting, and distress in adolescence. *Child development*, 25-39.
- Levy-Shiff, R., & Israelashvili, R. (1988). Antecedents of fathering: Some further exploration. *Developmental Psychology*, *24*(3), 434.
- Linn, P. L., & Degen Horowitz, F. (1983). The relationship between infant individual differences and mother-infant interaction during the neonatal period. *Infant behavior and development*, *6*(4), 415-427.
- Losoya, S. H., Callor, S., Rowe, D. C., & Goldsmith, H. H. (1997). Origins of familial similarity in parenting: A study of twins and adoptive siblings. *Developmental Psychology*, *33*(6), 1012.
- Lovejoy, M. C. (1991). Maternal depression: Effects on social cognition and behavior in parent-child interactions. *Journal of abnormal child psychology*, *19*(6), 693-706.

- Lovejoy, M. C., Graczyk, P. A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behavior: A meta-analytic review. *Clinical psychology review, 20*(5), 561-592.
- Luthar, S. S. (2006). Resilience in development: A synthesis of research across five decades. In D. Cicchetti & D. J. Cohen (Eds.) *Developmental Psychopathology 2nd ed., vol. 3* (pp. 739-795). Hoboken, NJ: Wiley.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development, 71*(3), 543-562.
- Lynch, M., & Cicchetti, D. (1998). An ecological-transactional analysis of children and contexts: The longitudinal interplay among child maltreatment, community violence, and children's symptomatology. *Development and psychopathology, 10*(02), 235-257.
- Maccoby, E. E., Snow, M. E., & Jacklin, C. N. (1984). Children's dispositions and mother-child interaction at 12 and 18 months: A short-term longitudinal study. *Developmental Psychology, 20*(3), 459.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the society for research in child development, 66*-104.
- Mangelsdorf, S., Gunnar, M., Kestenbaum, R., Lang, S., & Andreas, D. (1990). Infant Proneness-to-Distress Temperament, Maternal Personality, and Mother-Infant Attachment: Associations and Goodness of Fit. *Child development, 61*(3), 820-831.

- Martorell, G. A., & Bugental, D. B. (2006). Maternal variations in stress reactivity: Implications for harsh parenting practices with very young children. *Journal of Family Psychology, 20*(4), 641-647.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist, 56*(3), 227-238.
- Masten, A. (2007). Multilevel dynamics in developmental psychopathology. In A.S. Masten (ed) *The Minnesota Symposia on Child Psychology, Vol 34*. Erlbaum: Mahwah, NJ.
- Masten, A. S. (2014). *Ordinary magic: Resilience in development*. New York: Guilford Press.
- Masten, A. S., Hubbard, J. J., Gest, S. D., Tellegen, A., Garmezy, N., & Ramirez, M. (1999). Competence in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology, 11*, 143-169.
- Masten, A. S., Miliotis, D., Graham-Bermann, S. A., Ramirez, M., & Neemann, J. (1993). Children in homeless families: Risks to mental health and development. *Journal of Consulting and Clinical Psychology, 61*(2), 335 - 343.
- Masten, A. S., Sesma, A., Si-Asar, R., Lawrence, C., Miliotis, D., & Dionne, J. A. (1997). Educational risks for children experiences homelessness. *Journal of School Psychology, 35*(1), 27-46.

- McConnell, D., Breitzkreuz, R., & Savage, A. (2011). From financial hardship to child difficulties: main and moderating effects of perceived social support. *Child: care, health and development, 37*(5), 679-691.
- McCullough, C., Harding, H. G., Shaffer, A., Han, R. Z., & Bright, M. (2014). Intergenerational Continuity of Risky Parenting: A Person-Oriented Approach to Assessing Parenting Behaviors. *Journal of Family Violence, 29*(4), 409-418.
- McEwen, B. S. (2004). Protection and damage from acute and chronic stress: allostasis and allostatic overload and relevance to the pathophysiology of psychiatric disorders. *Annals of the New York Academy of Sciences, 1032*(1), 1-7.
- Merrick, M. T., Leeb, R. T., & Lee, R. D. (2013). Examining the role of safe, stable, and nurturing relationships in the intergenerational continuity of child maltreatment-introduction to the special issue. *Journal of Adolescent Health, 53*(4 Suppl), S1-3.
- Miliotis, D., Sesma, A., & Masten, A. S. (1999). Parenting as a protective process for school success in children from homeless families. *Early Education & Development, 10*, 111-133.
- Miller, P. M. (2011). A critical analysis of the research on student homelessness. *Review of Educational Research, 81*(3), 308-337.
- Mills-Koonce, W. R., Propper, C., Gariepy, J. L., Barnett, M., Moore, G. A., Calkins, S., & Cox, M. J. (2009). Psychophysiological correlates of parenting behavior in mothers of young children. *Developmental Psychobiology, 51*(8), 650-661.

- Narayan, A. J., Herbers, J. E., Plowman, E. J., Gewirtz, A. H., & Masten, A. S. (2012). Expressed emotion in homeless families: A methodological study of the five-minute speech sample. *Journal of Family Psychology, 26*(4), 648.
- National Center on Family Homelessness (2011). *America's youngest outcasts: State report card on child homelessness*. Needham, MA.
- National Center for Homeless Education (2008). Education for homeless children and youth program: Analysis of data . Greensboro, NC.
- National Center for Homeless Education (2014). Education for homeless children and youth program: Data collection summary. Greensboro, NC.
- National Research Council and Institute of Medicine. (2010). *Student mobility: Exploring the impact of frequent moves on achievement: Summary of a workshop*. Washington, DC
- Nehring, W. M., & Cohen, F. L. (1995). The development of an instrument to measure the effects of a parent's chronic illness on parenting tasks. *Issues in comprehensive pediatric nursing, 18*(2), 111-123.
- Neitzel, C., & Stright, A. (2004). Parenting behaviours during child problem solving: The roles of child temperament, mother education and personality, and the problem-solving context. *International Journal of Behavioral Development, 28*(2), 166-179.
- Newcomb, M. D., & Locke, T. F. (2001). Intergenerational cycle of maltreatment: A popular concept obscured by methodological limitations. *Child abuse & neglect, 25*(9), 1219-1240.

- Obradović, J., Long, J. D., Cutuli, J. J., Chan, C.-K., Hinz, E., Heistad, D., & Masten, A. S. (2009). Academic achievement of homeless and highly mobile children in an urban school district: Longitudinal evidence on risk, growth, and resilience. *Development and Psychopathology, 21*, 493-518.
- Okagaki, L. and Divecha, D.J. (1993), 'Development of parental beliefs', in T. Luster and L. Okagaki (eds), *Parenting: An Ecological Perspective*, Lawrence Erlbaum Associates, New Jersey.
- Paschall, M. J., & Fishbein, D. H. (2002). Executive cognitive functioning and aggression: A public health perspective. *Aggression and Violent Behavior, 7*(3), 215-235.
- Patterson, G. R. (1983). Stress: A change agent for family process. In N. Garmezy & M. Rutter (Eds.), *Stress, coping, and development in children* (pp. 235–264). New York: McGraw-Hill.
- Patterson, G. R. (2005). The next generation of PMTO models. *The Behavior Therapist, 28*(2), 25-32.
- Patterson, G. R., DeBaryshe, B. D., & Ramsey, E. (1989). *A developmental perspective on antisocial behavior* (Vol. 44, No. 2, p. 329). American Psychological Association.
- Pears, K. C., & Capaldi, D. M. (2001). Intergenerational transmission of abuse: a two-generational prospective study of an at-risk sample. *Child abuse & neglect, 25*(11), 1439-1461.

- Pett, M. A., Vaughan-Cole, B., & Wampold, B. E. (1994). Maternal employment and perceived stress: Their impact on children's adjustment and mother-child interaction in young divorced and married families. *Family Relations*, 151-158.
- Plowman, E. J. (2012). Coder impressions of family-interaction tasks derived from the Parent Management Training – Oregon Model. Minneapolis, MN, University of Minnesota.
- Prinzle, P., Stams, G. J. J., Deković, M., Reijntjes, A. H., & Belsky, J. (2009). The relations between parents' Big Five personality factors and parenting: A meta-analytic review. *Journal of personality and social psychology*, 97(2), 351.
- R Core Team (2014). R: A language and environment for statistical computing. R *Foundation for Statistical Computing*, Vienna, Austria.
- Rafferty, Y., & Shinn, M. (1991). The impact of homelessness on children. *American Psychologist*, 46(11), 1170 - 1179.
- Rafferty, Y., Shinn, M., & Weitzman, B. C. (2004). Academic achievement among formerly homeless adolescents and their continuously housed peers. *Journal of School Psychology*, 42, 179 - 199. The National Academies.
- Richman, A. L., Miller, P. M., & LeVine, R. A. (1992). Cultural and educational variations in maternal responsiveness. *Developmental Psychology*, 28(4), 614.
- Rodgers, A. Y. (1993). The assessment of variables related to the parenting behavior of mothers with young children. *Children and youth services review*, 15(5), 385-402.
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), 1-36.

- Rubin, D. H., Erickson, C. J., San Agustin, M., Cleary, S. D., Allen, J. K., & Cohen, P. (1996). Cognitive and academic functioning of homeless children compared with housed children. *Pediatrics, 97*(3), 289-294.
- Rumberger, R. W. (2003). The causes and consequences of student mobility. *Journal of Negro Education, 72*, 6-21.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In M.W. Kent & J. E. Rolf (Eds). *Primary prevention of psychopathology: Vol 3. Social competence in children*, 49-74. Hanover, NH: University Press of New England.
- Samuels, J., Shinn, M., & Buckner, J. C. (2010). Homeless children: Update on research, policy, programs, and opportunities: Prepared for the Office of the Assistant Secretary for Planning and Evaluation, U. S. Department of Health and Human Services.
- San Agustin, M., Cohen, P., Rubin, D., Cleary, S. D., Erickson, C. J., & Allen, J. K. (1999). The Montefiore community children's project: a controlled study of cognitive and emotional problems of homeless mothers and children. *Journal of Urban Health, 76*(1), 39-50.
- Sanson, A., Hemphill, S. A., & Smart, D. (2004). Connections between temperament and social development: A review. *Social Development, 13*(1), 142-170.
- Scalzo, C., Williams, P. G., & Holmbeck, G. N. (2005). Maternal self-assessed health and emotionality predict maternal response to child illness. *Children's Health Care, 34*(1), 61-79.

- Shonkoff, J. P. & Phillips, D. A., (2000). From neurons to neighborhoods: The science of early childhood development. Washington DC: National Academy Press.
- Simons, R. L., Lorenz, F. O., Wu, C. I., & Conger, R. D. (1993). Social network and marital support as mediators and moderators of the impact of stress and depression on parental behavior. *Developmental Psychology*, 29(2), 368.
- Spinath, F. M., & O'Connor, T. G. (2003). A behavioral genetic study of the overlap between personality and parenting. *Journal of Personality*, 71(5), 785-808.
- Sroufe, L. A. (1996). Emotional development: The organization of emotional life in the early years. New York: Cambridge University Press.
- Sroufe, L. A. (1997). Psychopathology as an outcome of development. *Development and Psychopathology*, 9, 251-268.
- Sroufe, L. A., Egeland, B., Carlson, E.A., & Collins, W. A. (2005). The development of the person: The Minnesota Study of Risk and Adaptation from birth to adulthood. New York, NY: The Guilford Press.
- Sroufe, L. A., & Fleeson, J. (1986). Attachment and the construction of relationships. *Relationships and development*, 51, 72.
- Stanton, B., Cole, M., Galbraith, J., Li, X., Pendleton, S., Cottrel, L., ... & Kaljee, L. (2004). Randomized trial of a parent intervention: parents can make a difference in long-term adolescent risk behaviors, perceptions, and knowledge. *Archives of pediatrics & adolescent medicine*, 158(10), 947.
- Stevenson-Hinde, J. (1989). Behavioral inhibition: Issues of context. *Perspectives on behavioral inhibition*, 125-138.

- Stormshak, E. A., Bierman, K. L., McMahon, R. J., & Lengua, L. J. (2000). Parenting practices and child disruptive behavior problems in early elementary school. *Journal of clinical child psychology, 29*(1), 17-29.
- Taylor, Z. E., Larsen-Rife, D., Conger, R. D., Widaman, K. F., & Cutrona, C. E. (2010). Life stress, maternal optimism, and adolescent competence in single mother, African American families. *Journal of family psychology, 24*(4), 468.
- van den Bloom, D. C., & Hoeksma, J. B. (1994). The effect of infant irritability on mother-infant interaction: A growth-curve analysis. *Developmental Psychology, 30*(4), 581.
- Van Ijzendoorn, M. H. (1992). Intergenerational transmission of parenting: A review of studies in nonclinical populations. *Developmental review, 12*(1), 76-99.
- Ward, M. J., & Carlson, E. A. (1995). Associations among Adult Attachment Representations, Maternal Sensitivity, and Infant-Mother Attachment in a Sample of Adolescent Mothers. *Child development, 66*(1), 69-79.
- Weathers, F.W., Litz, B. T., Huska, J. A., & Keane, T. M. (1994). *PTSD Checklist—Civilian version*. Boston: National Center for PTSD, Behavioral Science Division.
- Werner, E. E., & Smith, R. S. (1977). *Kauai's children come of age*. Honolulu: University Press of Hawaii.
- White, C. P., White, M. B., & Fox, M. A. (2009). Maternal fatigue and its relationship to the caregiving environment. *Families, Systems, & Health, 27*(4), 325.

- Wood, D., Halfon, N., Scarlata, D., Newacheck, P., & Nessim, S. (1993). Impact of family relocation on children's growth, development, school function, and behavior. *JAMA*, 270(11), 1334-1338.
- Yates, T. M., Egeland, B., & Sroufe, L. A. (2003). Rethinking resilience: A developmental process perspective. *Resilience and Vulnerability: Adaptation in the Context of Childhood Adversities*, New York: Cambridge University Press.
- Ziesemer, C., Marcoux, L., & Marwell, B. E. (1994). Homeless children: Are they different from other low-income children? *Social Work*, 39, 658–668.

## Appendix A

Table A1  
Results of Hierarchical Regression for Warmth and Structure on Age, Sex,  
Agreeableness, Historic Adversity, and Historic Adversity X Agreeableness

<i>Predictors of Warmth and Structure</i>							
	Variable	B	SE B	$\beta$	$R^2$	$\Delta R^2$	
Step 1							
	Parent Sex	.07	.35	.02			
	Parent Age	.01	.01	.10	.01		
Step 2							
	Parent Sex	.06	.33	.02			
	Parent Age	.01	.01	.05			
	Agreeableness	.28	.07	.36	**	.13	.13 **
Step 3							
	Parent Sex	.11	.32	.03			
	Parent Age	.01	.01	.05			
	Agreeableness	.30	.07	.33	**		
	Historic Adversity	.06	.03	.19	*	.17	.04 *
Step 4							
	Parent Sex	.11	.33	.03			
	Parent Age	.01	.01	.06			
	Agreeableness	.26	.07	.33	**		
	Historic Adversity	.06	.03	.19	*		
	Historic Adversity X Agreeableness	.00	.04	.01		.17	.00

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

Table A2  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex,  
 Agreeableness, Recent Adversity, and Recent Adversity X Agreeableness

*Predictors of Warmth and Structure*

Variable	B	SE B	$\beta$		R <sup>2</sup>	$\Delta R^2$	
Step 1							
Parent Sex	.07	.35	.02				
Parent Age	.01	.01	.10		.01		
Step 2							
Parent Sex	.06	.33	.02				
Parent Age	.01	.01	.05				
Agreeableness	.28	.07	.36	**	.13	.13	**
Step 3							
Parent Sex	.01	.33	.01				
Parent Age	.01	.01	.05				
Agreeableness	.28	.07	.35	**			
Recent Adversity	.01	.07	.02		.13	.00	
Step 4							
Parent Sex	.05	.33	.01				
Parent Age	.01	.01	.05				
Agreeableness	.28	.07	.36	**			
Recent Adversity	.01	.07	.01				
Recent Adversity X Agreeableness	.01	.04	.02		.13	.00	

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

Table A3  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Resources,  
 Mental Health, and Mental Health X Resources

<i>Predictors of Warmth and Structure</i>							
	Variable	B	SE B	$\beta$		R <sup>2</sup>	$\Delta R^2$
Step 1							
	Parent Sex	.07	.35	.02			
	Parent Age	.08	.07	.01		.01	
Step 2							
	Parent Sex	.00	.32	.00			
	Parent Age	-.01	.06	.12			
	Resources	.32	.06	.41 **		.17	.16 **
Step 3							
	Parent Sex	.05	.33	-.02			
	Parent Age	-.06	.07	.10			
	Resources	.34	.07	.44 **			
	Mental Health	.07	.07	.09		.18	.01
Step 4							
	Parent Sex	-.07	.32	-.02			
	Parent Age	.09	.07	.11			
	Resources	.33	.07	.41 **			
	Mental Health	.07	.07	.09			
	Mental Health X Resources	.19	.13	.12		.19	.01

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

Table A4  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Cognitive Resources, Mental Health, and Mental Health X Cognitive Resources

<i>Predictors of Warmth and Structure</i>						
Variable	B	SE B	$\beta$		$R^2$	$\Delta R^2$
Step 1						
Parent Sex	.07	.35	.02			
Parent Age	.01	.01	.10		.01	
Step 2						
Parent Sex	.06	.33	.02			
Parent Age	.01	.01	.06			
Cognitive Resources	.27	.07	.34	**	.12	.12 **
Step 3						
Parent Sex	.07	.34	.02			
Parent Age	.01	.01	.06			
Cognitive Resources	.27	.07	.34	**		
Mental Health	-.01	.07	-.02		.12	.00
Step 4						
Parent Sex	.15	.34	.04			
Parent Age	.01	.01	.08			
Cognitive Resources	.25	.07	.32	**		
Mental Health	-.02	.07	-.03			
Mental Health X Cognitive Resources	.14	.10	.11		.14	.01

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

Table A5  
Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Social Support, Mental Health, and Mental Health X Social Support

<i>Predictors of Warmth and Structure</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.07	.35	.01		
	Parent Age	.01	.01	.10	.01	
Step 2						
	Parent Sex	.01	.35	.00		
	Parent Age	.01	.01	.11		
	Social Support	.09	.07	.11	.02	.01
Step 3						
	Parent Sex	.03	.36	.01		
	Parent Age	.01	.01	.11		
	Social Support	.08	.07	.11		
	Mental Health	-.03	.07	.03	.02	.00
Step 4						
	Parent Sex	.05	.36	.01		
	Parent Age	.01	.01	.12		
	Social Support	.09	.07	.11		
	Mental Health	-.03	.07	.03		
	Mental Health X Social Support	-.09	.12	.07	.02	.00

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

Table A6  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex,  
 Agreeableness, Mental Health, and Mental Health X Agreeableness

<i>Predictors of Warmth and Structure</i>							
	Variable	B	SE B	$\beta$		$R^2$	$\Delta R^2$
Step 1							
	Parent Sex	.07	.35	.02			
	Parent Age	.01	.01	.10		.01	
Step 2							
	Parent Sex	.06	.33	.02			
	Parent Age	.01	.01	.05			
	Agreeableness	.28	.07	.36	**	.13	.13 **
Step 3							
	Parent Sex	.08	.33	.02			
	Parent Age	.01	.01	.06			
	Agreeableness	.28	.07	.36	**		
	Mental Health	-.03	.07	-.04		.14	.00
Step 4							
	Parent Sex	.14	.33	.04			
	Parent Age	.01	.01	.07			
	Agreeableness	.29	.07	.37	**		
	Mental Health	-.02	.07	-.02			
	Mental Health X Agreeableness	.17	.11	.13		.15	.02

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

Table A7  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Physical Health, Historic Adversity, and Historic Adversity X Physical Health

<i>Predictors of Warmth and Structure</i>							
	Variable	B	SE B	$\beta$		$R^2$	$\Delta R^2$
Step 1							
	Parent Sex	.07	.35	.02			
	Parent Age	.01	.01	.10		.01	
Step 2							
	Parent Sex	.13	.34	.03			
	Parent Age	.02	.01	.16			
	Physical Health	.19	.07	.25	**	.07	.06 **
Step 3							
	Parent Sex	.20	.33	.05			
	Parent Age	.02	.01	.17			
	Physical Health	.22	.07	.28	**		
	Historic Adversity	.09	.03	.27	**	.14	.07 **
Step 4							
	Parent Sex	.13	.33	.03			
	Parent Age	.02	.01	.17			
	Physical Health	.21	.07	.27	**		
	Historic Adversity	.10	.03	.29	**		
	Historic Adversity X Physical Health				*		
	Physical Health	.07	.13	.17		.17	.03 *

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

Table A8  
 Results of Hierarchical Regression for Warmth and Structure on Age, Sex, Physical Health, Recent Adversity, and Recent Adversity X Physical Health

<i>Predictors of Warmth and Structure</i>						
Variable	B	SE B	$\beta$		R <sup>2</sup>	$\Delta R^2$
Step 1						
Parent Sex	.07	.35	.02			
Parent Age	.01	.01	.10		.01	
Step 2						
Parent Sex	.13	.34	.03			
Parent Age	.02	.01	.16			
Physical Health	.19	.07	.25	**	.07	.06 **
Step 3						
Parent Sex	.09	.34	.02			
Parent Age	.02	.01	.14			
Physical Health	.20	.07	.25	**		
Recent Adversity	.06	.07	.08		.07	.01
Step 4						
Parent Sex	.04	.35	.01			
Parent Age	.02	.01	.15			
Physical Health	.19	.07	.24	**		
Recent Adversity	.05	.07	.06			
Recent Adversity X Physical Health	.05	.04	.13		.09	.02

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

Table A9  
Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Resources,  
Historic Adversity, and Historic Adversity X Resources

*Predictors of Harshness and Negativity*

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Variable	B	SE B	$\beta$	$R^2$	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.01	.08	.01	.00	
Step 2					
Parent Sex	.08	.39	.02		
Parent Age	.00	.08	.00		
Resources	-.19	.08	-.21 *	.04	.04 *
Step 3					
Parent Sex	.05	.40	.01		
Parent Age	.00	.08	.00		
Resources	-.18	.08	-.20 *		
Historic Adversity	-.08	.08	-.09	.05	.01
Step 4					
Parent Sex	.05	.40	.01		
Parent Age	.00	.08	.00		
Resources	-.18	.08	-.20 *		
Historic Adversity	-.08	.08	-.09		
Historic Adversity X Resources	-.01	.05	-.02	.05	.00

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

Table A10  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Cognitive Resources, Historic Adversity, and Historic Adversity X Cognitive Resources

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.03		
Cognitive Resources	-.13	.08	-.14	.02	.02
Step 3					
Parent Sex	.01	.40	.00		
Parent Age	.00	.01	.03		
Cognitive Resources	-.11	.08	-.13		
Historic Adversity	-.04	.03	-.10	.03	.01
Step 4					
Parent Sex	.02	.40	.01		
Parent Age	.00	.01	.03		
Cognitive Resources	-.12	.08	-.13		
Historic Adversity	-.04	.03	-.11		
Historic Adversity X Cognitive Resources	.02	.05	.04	.03	.00

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

Table A11  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Social Support, Historic Adversity, and Historic Adversity X Social Support

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.13	.40	.03		
Parent Age	.00	.01	.00		
Social Support	-.15	.08	-.17	.03	.03
Step 3					
Parent Sex	.01	.40	.02		
Parent Age	.00	.01	.00		
Social Support	-.13	.08	-.15		
Historic Adversity	-.03	.03	-.09	.04	.01
Step 4					
Parent Sex	.01	.40	.02		
Parent Age	.00	.01	-.01		
Social Support	-.13	.08	-.15		
Historic Adversity	-.03	.04	-.08		
Historic Adversity X Social Support	-.02	.04	-.04	.04	.00

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

Table A12  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex,  
 Agreeableness, Historic Adversity, and Historic Adversity X Agreeableness

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.02		
Agreeableness	-.08	.08	-.08	.01	.01
Step 3					
Parent Sex	.01	.40	.00		
Parent Age	.00	.01	.02		
Agreeableness	-.06	.08	-.07		
Historic Adversity	-.04	.03	-.11	.02	.01
Step 4					
Parent Sex	.02	.40	.00		
Parent Age	.00	.01	.01		
Agreeableness	-.08	.08	-.09		
Historic Adversity	-.04	.03	-.10		
Historic Adversity X Agreeableness	-.04	.05	-.08	.02	.01

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

Table A13  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Physical Health, Historic Adversity, and Historic Adversity X Physical Health

<i>Predictors of Harshness and Negativity</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.01	.01	.00	
Step 2						
	Parent Sex	-.01	.40	.00		
	Parent Age	.00	.01	-.03		
	Physical Health	-.14	.08	-.16	.02	.02
Step 3						
	Parent Sex	-.05	.40	-.01		
	Parent Age	.00	.01	-.03		
	Physical Health	-.16	.08	-.18 *		
	Historic Adversity	-.05	.03	-.14	.04	.02
Step 4						
	Parent Sex	-.01	.40	.00		
	Parent Age	-.01	.01	-.03		
	Physical Health	-.15	.08	-.17		
	Historic Adversity	-.06	.03	-.15		
	Historic Adversity X Physical Health	-.04	.04	-.08	.05	.01

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

Table A14  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Resources,  
 Recent Adversity, and Recent Adversity X Resources

<i>Predictors of Harshness and Negativity</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.08	.01	.00	
Step 2						
	Parent Sex	.08	.40	.02		
	Parent Age	.00	.08	.00		
	Resources	-.18	.08	-.20 *	.04	.04 *
Step 3						
	Parent Sex	.07	.40	.02		
	Parent Age	.00	.08	.00		
	Resources	-.19	.08	-.21 *		
	Recent Adversity	.02	.08	.02	.04	.00
Step 4						
	Parent Sex	.07	.40	.02		
	Parent Age	.00	.08	.00		
	Resources	-.19	.08	-.21 *		
	Recent Adversity	.02	.08	.02		
	Recent Adversity X Resources	.02	.06	.02	.05	.00

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

Table A15  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Cognitive Resources, Recent Adversity, and Recent Adversity X Cognitive Resources

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.03		
Cognitive Resources	-.13	.08	-.14	.02	.02
Step 3					
Parent Sex	.03	.40	.01		
Parent Age	.00	.01	.03		
Cognitive Resources	-.13	.08	-.14		
Recent Adversity	.02	.08	.02	.02	.00
Step 4					
Parent Sex	.06	.40	.01		
Parent Age	.00	.01	.04		
Cognitive Resources	-.13	.08	-.15		
Recent Adversity	.02	.08	.02		
Recent Adversity X Cognitive Resources	.04	.04	.09	.03	.01

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

Table A16  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Social Support, Recent Adversity, and Recent Adversity X Social Support

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.13	.40	.03		
Parent Age	.00	.01	.00		
Social Support	-.15	.08	-.17	.03	.03
Step 3					
Parent Sex	.14	.40	.03		
Parent Age	.00	.01	.00		
Social Support	-.15	.08	-.17		
Recent Adversity	.00	.08	.00	.03	.00
Step 4					
Parent Sex	.13	.40	.03		
Parent Age	.00	.01	-.01		
Social Support	-.16	.08	-.18		*
Recent Adversity	.00	.08	.00		
Recent Adversity X Social Support	.07	.05	.12	.04	.02

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

Table A17  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex,  
 Agreeableness, Recent Adversity, and Recent Adversity X Agreeableness

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.02		
Agreeableness	-.07	.08	-.08	.01	.01
Step 3					
Parent Sex	.03	.40	.01		
Parent Age	.00	.01	.02		
Agreeableness	-.08	.08	-.08		
Recent Adversity	.03	.08	.03	.01	.00
Step 4					
Parent Sex	.03	.40	.01		
Parent Age	.00	.01	-.01		
Agreeableness	-.10	.09	-.12		
Recent Adversity	.04	.08	.04		
Recent Adversity X Agreeableness	-.05	.05	-.09	.02	.01

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

Table A18  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Physical Health, Recent Adversity, and Recent Adversity X Physical Health

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.00	.40	.00		
Parent Age	.00	.01	-.03		
Physical Health	-.15	.08	-.16	.02	.02
Step 3					
Parent Sex	-.01	.40	.00		
Parent Age	.00	.01	.03		
Physical Health	-.14	.08	-.16		
Recent Adversity	.01	.08	.00	.02	.00
Step 4					
Parent Sex	.02	.40	.01		
Parent Age	.00	.01	-.03		
Physical Health	-.14	.08	-.15		
Recent Adversity	.02	.08	.02		
Recent Adversity X Physical Health	-.03	.04	-.07	.03	.01

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

Table A19  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Cognitive Resources, Mental Health, and Mental Health X Cognitive Resources

*Predictors of Harshness and Negativity*

Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1					
Parent Sex	.04	.40	.01		
Parent Age	.00	.01	.01	.00	
Step 2					
Parent Sex	.00	.40	.01		
Parent Age	.00	.01	.03		
Cognitive Resources	-.13	.08	-.14	.02	.02
Step 3					
Parent Sex	-.04	.40	-.01		
Parent Age	.00	.01	.00		
Cognitive Resources	-.11	.08	-.12		
Mental Health	.13	.08	.15	.04	.02
Step 4					
Parent Sex	-.20	.40	-.04		
Parent Age	.00	.01	-.02		
Cognitive Resources	-.09	.08	-.10		
Mental Health	.15	.08	.16		
Mental Health X Cognitive Resources	-.18	.12	-.13	.06	.02

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

Table A20  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex,  
 Agreeableness, Mental Health, and Mental Health X Agreeableness

<i>Predictors of Harshness and Negativity</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.01	.01	.00	
Step 2						
	Parent Sex	-.05	.40	.01		
	Parent Age	.00	.01	.02		
	Agreeableness	-.07	.08	-.08	.01	.01
Step 3						
	Parent Sex	-.05	.40	-.01		
	Parent Age	.00	.01	.00		
	Agreeableness	-.07	.08	-.08		
	Mental Health	.14	.08	.16	.03	.03
Step 4						
	Parent Sex	-.09	.40	-.02		
	Parent Age	.00	.01	-.01		
	Agreeableness	-.08	.08	-.08		
	Mental Health	.14	.08	.15		
	Mental Health X Agreeableness	-.10	.13	-.07	.04	.01

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

Table A21  
 Results of Hierarchical Regression for Harshness and Negativity on Age, Sex, Physical Health, Mental Health, and Mental Health X Physical Health

<i>Predictors of Harshness and Negativity</i>						
	Variable	B	SE B	$\beta$	R <sup>2</sup>	$\Delta R^2$
Step 1						
	Parent Sex	.04	.40	.01		
	Parent Age	.00	.01	.01	.00	
Step 2						
	Parent Sex	-.01	.40	.00		
	Parent Age	.00	.01	-.03		
	Physical Health	-.14	.08	-.16	.02	.02
Step 3						
	Parent Sex	-.06	.40	-.01		
	Parent Age	.00	.01	-.03		
	Physical Health	-.09	.09	-.10		
	Mental Health	.10	.09	.11	.03	.01
Step 4						
	Parent Sex	.02	.41	.00		
	Parent Age	.00	.01	-.03		
	Physical Health	-.08	.09	-.08		
	Mental Health	.10	.09	.12		
	Mental Health X Physical Health	-.13	.12	-.09	.04	.01

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