The moderating effect of relationships on intergenerational risk for infant neglect by young mothers

Jessica Dym Bartlett a,*, M. Ann Easterbrooks b

a Boston Children’s Hospital/Harvard Medical School, Brazelton Touchpoints Center, Division of Developmental Medicine, 1295 Boylston St., Suite 320, Boston, MA 02215, USA
b Tufts University, Medford, MA, USA

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ABSTRACT

Infant neglect is the form of child maltreatment that occurs most often, yet has been least amenable to prevention. A maternal history of childhood maltreatment is a potent risk factor for child neglect, yet most maltreated mothers break intergenerational cycles of child abuse and neglect. Little is known about what protective factors support discontinuity in intergenerational transmission. This study examined whether certain factors (positive childhood care, older maternal age, social support) buffer intergenerational risk for neglect among the infants of young mothers, a population at high risk of being victimized. For young mothers in the sample (<21 years at birth; n = 447), the effect of a maternal history was assessed separately for different maltreatment types according to data on substantiated reports from Child Protective Services. Early risk for neglect was assessed using maternal self-report of parenting empathy. The results revealed that both infants and their mothers experienced neglect more often than any other maltreatment type. However, approximately 77% of maltreated mothers broke the cycle with their infants (<30 months). Maternal age moderated the relation between a maternal history of neglect and infant neglect, and social support moderated the relation between childhood neglect and maternal empathy. Neglected mothers had considerably higher levels of parenting empathy when they had frequent access to social support than when they had less frequent support, whereas the protective effect of social support was not nearly as strong for nonmaltreated mothers. Study findings highlight resilience in parenting despite risk for infant neglect, but underscore the context specificity of protective processes.

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Introduction

Infant neglect is the most common form of child maltreatment and arguably poses the greatest threat to children’s well-being, yet it has received limited public attention (Dubowitz, 2007). In 2012, Child Protective Services (CPS) identified approximately 679,000 children who were victims of abuse and neglect. Over three-quarters (78%) of these children suffered neglect, a figure that far exceeds physical abuse (18%) and sexual abuse (9%) combined (U.S. Department of Health & Human Services, Administration for Children & Families, Children’s Bureau, 2013). Children birth to one year have the highest rate...
of victimization (21 per 1,000 children of the same age in the U.S.) and incur the most serious harm from neglect (Sedlak et al., 2010).

Infant exposure to neglect, especially when severe and prolonged, has been found to have adverse and long lasting consequences for children's physical, cognitive, and socioemotional development in ways that are that are distinct from other forms of maltreatment (De Bellis, 2005; Erickson & Egeland, 2002; Hildyard & Wolfe, 2002; Kim & Cicchetti, 2006; Pollak et al., 2010). Exposure to neglect during this sensitive period may undermine neuronal development and limit overall brain growth (De Bellis, 2005), lead to serious health concerns (DePanfilis, 2006; Shonkoff, Boyce, & McEwen, 2009), result in cognitive, academic, and language problems (Erickson & Egeland, 2002), and lead to insecure attachments, poor self-regulation, difficulty with peers, internalizing and externalizing problems, and mental illness (Cyr, Euser, Bakermans-Kranenburg, & Van IJzendoorn, 2010; Kim & Cicchetti, 2006; Erickson & Egeland, 2002). Neglect also causes the majority (70%) of maltreatment-related deaths, half (48%) of which occur before a child's first birthday (U.S. Department of Health & Human Services, Administration for Children & Families, Children's Bureau, 2013).

The perpetrators of child maltreatment are most often parents (80%; U.S. Department of Health, Administration for Children & Families, Children’s Bureau, 2013), and this is especially true in cases of neglect. An estimated 92% of neglected children are victimized by a biological parent, compared to 64% of abused children (Sedlak et al., 2010). Young mothers, in particular, are at heightened risk for neglecting their offspring (Sidebotham & Golding, 2001; Slack, Holl, McDaniel, Yoo, & Bolger, 2004).

Infant neglect

We assessed infant neglect using cumulative records from the state CPS agency prenatally until their most recent report at Time 2 data collection (up to May 2011). We utilized a dummy variable for infant neglect by any perpetrator (1 = substantiated report of neglect but no substantiated reports of abuse; 0 = no substantiated reports of maltreatment of any kind). Six cases of physical abuse (with or without neglect) were removed to maintain “clean” maltreatment categories. No other forms of maltreatment (e.g., sexual abuse, emotional abuse, congenital drug addiction) were reported for infants in the study. We coded alternative response cases with a disposition of “concern” as maltreatment when a family received services (n = 2), but “concern” with no services and “no concern” as non-maltreated (n = 1).

Infant neglect by adolescent mothers. Research on the relation between infant maltreatment and maternal age suggests that young mothers are more likely to neglect their infants than are adult mothers (Coley & Chase-Lansdale, 1998; Whitman, Borkowski, Krogh, & Weed, 2001). Furthermore, the youngest mothers may be at highest risk for neglectful parenting (Stier, Leventhal, Berg, Johnson, & Mezger, 1993; Zuravin & DiBlasio, 1992). For example, a study by Stier et al. (1993) found that the rate of neglect was 2.4 times as high for parents under age 18 than for mothers age 19 to 34. Another study by Zuravin and DiBlasio (1992) found higher risk for neglect even when restricting maternal age to the teenage years (18 years or younger at first birth); neglectful adolescent mothers were more likely than their nonmaltreating peers to have had their first child at a younger age. The etiology of infant neglect by young mothers may be explained in part by their lack of developmental preparedness for parenthood, but also by their disproportionate exposure to risk conditions compared to women who delay parenting until adulthood. More than their older counterparts, young mothers tend to endure difficult life circumstances linked to neglect, such as a maternal history of childhood maltreatment, poverty, social isolation, and single parent status. For example, when compounded with their immaturity, may compromise their ability to demonstrate empathy and provide adequate care (Borkowski, Whitman, & Farris, 2007; Goldman & Salus, 2003; Slack et al., 2004).

Prominent theories on child maltreatment, including ecological systems approaches, explain infant neglect as a consequence of dynamic transactions among children, young parents, and their environments (Belsky, 1993; Cicchetti & Lynch, 1993). This view also is reflected in Relational Developmental Systems theories (Lerner et al., 2013; Overton, 2013) that consider multiple aspects of a developmental system (e.g., individual history, social relationships, and environmental context). The ontogeny of social relationships appears to play a prominent role in such approaches. A mother’s experiences of childhood positive care and maltreatment influence her affective and cognitive interpretations of her parenting role, as well as her interactions with her current social context. Maltreated mothers have smaller and less satisfying social support networks (Vranceanu, Hobfoll, & Johnson, 2007) and are more likely to experience higher levels of parenting stress and to maltreat their offspring (Deater-Deckard, 2004; Gaudin, 2001).

Understanding how such risk factors are implicated in the etiology of neglect is only half of the picture, however. A resilience framework, defining resilience as “positive adaptation within the context of significant adversity” (Luthar, Cicchetti, & Becker, 2000, p. 543), offers a complimentary perspective, in which interventionists and policymakers seek to understand how to offset risk for neglect (Masten & Powell, 2003; Werner, 2000). At present, the empirical literature on infant maltreatment is replete with findings on maladaptive parenting in high-risk contexts rather than successful parenting under similar conditions. This approach unnecessarily limits prevention research to identifying risks to be ameliorated rather than avenues for promoting healthy parenting. For example, the majority of maltreatment researchers emphasize continuity versus discontinuity in intergenerational transmission of maltreatment, despite the fact that most parents break these cycles (Kaufman & Zigler, 1987; Ertem, Leventhal, & Dobbs, 2000).
Infant neglect and discontinuity in intergenerational cycles of child maltreatment

The study of intergenerational cycles of maltreatment has garnered considerable interest from researchers (Ertem et al., 2000; Kaufman & Zigler, 1987; Thornberry, Knight, & Lovegrove, 2012), including recent attention from investigators interested in adolescent parenting (Borkowski et al., 2007; Dixon, Browne, & Hamilton-Giachritis, 2009). The theoretical underpinning is that exposure to maltreatment in childhood increases the odds that an individual will become a perpetrator as an adult, through insecure attachments and dysfunctional internal working models of relationships (Bowlby, 1977), learned behaviors (Bandura, 1973), or a “cascade” effect, in which maltreatment disturbs key developmental processes that negatively affect relational competence over time (Masten & Cicchetti, 2010). However, the field currently lacks universal agreement on the extent of intergenerational transmission (Kaufman & Zigler, 1987; Pears & Capaldi, 2001; Thornberry et al., 2012). Some critics have noted that few studies are methodologically rigorous, and actual continuity may be lower than Kaufman and Zigler’s (1987) widely cited estimate of 30% (Ertem et al., 2000; Thornberry et al., 2012). The controversy surrounding intergenerational cycles suggests the need for more refined research. For example, studies rarely distinguish neglect from abuse in each generation, or delineate findings by age of the child or parent (Bartlett & Easterbrooks, 2012).

Protective factors associated with discontinuity. The extent of intergenerational continuity may be unclear, but most researchers agree that discontinuity is the most common outcome (Kaufman & Zigler, 1987; Ertem et al., 2000; Thornberry et al., 2012). Prospective longitudinal investigations have shown only modest correlations across generations (Conger, McCarty, Yang, Lahey, & Burgess, 2009). Identifying moderators of transmission is a promising place to begin to understand the processes that underlie discontinuity and can inform prevention (Berlin, Appleyard, & Dodge, 2011; Dixon, Brown, & Hamilton-Giachritis, 2005a; Dixon, Hamilton-Giachritis, & Brown, 2005b).

In recent years, resilience-based research has begun to elucidate protective factors that reduce child maltreatment, including nurturing attachments, knowledge about parenting and child development, concrete supports, parental resilience, and social connections (Children’s Bureau, Child Welfare Information Gateway, FRIENDS National Resource Center for Community-Based Child Abuse Prevention, & the Center for the Study of Social Policy, 2011). Nevertheless, little is known about which of these factors moderate intergenerational cycles of maltreatment and reduce risk for infant neglect more specifically. Several decades of research on protective factors suggests that positive relationships with caregivers, family members, and other members of social support networks increase the odds that individuals will interact with their offspring in sensitive and empathetic ways (Werner, 2000). A reasonable inference from this literature, then, is that these factors may play a key role in explaining why a parental history of childhood maltreatment increases the chances for, yet does not guarantee, maltreatment in the next generation (Ertem et al., 2000; Kaufman & Zigler, 1987).

The small number of studies that examine a parent’s childhood history of maltreatment as a risk factor for infant neglect implicate social and financial protective factors in particular (Belsky, Conger, & Capaldi, 2009; Dixon et al., 2009). Dixon et al. (2009) determined that the presence of social support and financial solvency distinguished “cycle breakers” from families referred to CPS. Egeland and colleagues (e.g., Egeland, Jacobvitz, & Sroufe, 1988) showed that nonrepeating parents were more likely to have: had a supportive parent, experienced fewer stressful events, participated in psychotherapy, had a supportive intimate relationship, and exhibited a conscious resolve not to repeat negative patterns. More recently, Bartlett and Easterbrooks (2012) found that when mothers reported physical abuse and also positive care in childhood, they were not at increased risk for neglect, suggesting a compensatory effect of nurturing parenting in the context of an abusive childhood. Taken together, the literature indicates that supportive relationships may be a key factor in ending cycles of child maltreatment related to neglect (Dixon et al., 2005a,b; Dixon et al., 2009; Egeland et al., 1988; Kaufman & Zigler, 1987).

Supportive relationships

Beginning at birth, and perhaps even before, individuals are embedded in social and caregiving systems (Winnicott, 1965). Consequently, relationships with others in these systems exert influence on individual development (Chase-Lansdale & Brooks-Gunn, 1994) and impact parenting in the next generation (Vondra & Belsky, 1993). However, the nature of relationships in childhood (e.g., nurturing, abusive, neglectful) and social support (e.g., quantity, quality, type) are as consequential to parenting as are their presence or absence (Coley & Chase-Lansdale, 1998; Voight, Hans, & Bernstein, 1996). Lieberman, Padrón, van Horn, and Harris (2005) suggested that children who experience maltreatment “may be able to register simultaneously the ‘bad’ and the ‘good’ parts of their parents” (p. 512) and subsequently repeat positive care receiving experiences within parent–child interactions in the present. From this vantage point, discontinuity in intergenerational cycles of maltreatment may be partially explained by the presence of nurturing relational experiences that a mother can draw upon to formulate more adaptive caregiving strategies with her own child. Since mothers’ perceptions of the care they received early in life may differentiate neglectful parents from nonmaltreating parents (Gaudin, 2001), incorporating maternal perceptions of positive care into explanatory models of transmission may be useful.

Support received in the context of healthy relationships, whether from family members, informal social networks, or service providers and formal programs, enhances young mothers’ overall well-being and maternal functioning (Leadbeater & Linares, 1992). Adequate social support is associated with less parental stress and depression, and greater parental sensitivity; thus, it may be a key factor in countering risk for infant neglect (Gaudin, 2001; Li, Godinet, & Arnsberger, 2010; Whitman et al., 2001; Zolotor & Runyan, 2006) and in distinguishing young mothers who break cycles of maltreatment from
those who do not (Dixon et al., 2009). The buffering model of social support (Armstrong, Birnie-Lefcovich, & Ungar, 2005), the notion that “social support protects individuals from the potentially harmful effects of stressful events” (p. 272), is widely embraced by maltreatment policymakers, researchers, and interventionists; yet it is based on a surprisingly unrefined empirical literature (Thompson, 1995). The role of social support in preventing child neglect is complex (Gaudin, 2001; Li et al., 2010), and this study seeks to identify particular relational mechanisms of protection that moderate cycles of maltreatment leading to infant neglect, and to begin to explain how they operate in young families’ lives.

Conceptualizing infant neglect for prevention research

Researchers do not yet have conceptual clarity with regard to definition and operationalization of infant neglect, and inconsistencies in the literature have made research and cross-study comparison difficult (Dubowitz, 2007). Just what constitutes neglect is perhaps more vague than for other forms of maltreatment because it is frequently evidenced by an act of omission rather than a prominent parental behavior or visible injury. As a result, neglect is greatly underreported and not well-examined (DePanfilis, 2006). One of the most hotly debated issues related to identifying neglect is what source of information to use. Data from CPS have a number of advantages—they are routinely collected, widely available, and identify cases in which neglect is highly likely to have occurred. However, CPS data miss up to half of actual instances that occur (Cross & Casanueva, 2009; Dubowitz et al., 2005) and represent a conservative estimate. Assessment of early risk for maltreatment may help to identify children who are not reported to CPS. Research suggests that parental lack of empathy may be related to early neglect risk (de Paúl & Guibert, 2008; Shahar, 2001).

Lack of maternal empathy. Several researchers have found that a parental lack of empathy is associated with child neglect (Lounds, Borkowski, & Whitman, 2006; Schatz & Lounds, 2007; Shahar, 2001), and that sensitive, empathetic mothering is “woefully lacking in the caregiving environments of maltreated infants” (Cicchetti, Rogosch, Toth, & Sturge-Apple, 2011, p. 789). Neglectful mothers are less able to “read” and respond to their babies’ emotional cues or to engage in emotional perspective taking (Dubowitz et al., 2005), and they are less expressive, offer little exchange of emotional information, and acknowledge their children less than do non-maltreating mothers (Gaudin, Polansky, Kilpatrick, & Shilton, 1996). This may reflect an inability to empathize with their children (de Paúl & Guibert, 2008). Adolescent parents, in particular, lack empathy in interactions with their babies (Schatz & Lounds, 2007; Shahar, 2001) and may be especially unlikely to pick up on and respond to an infant’s needs when they have been maltreatment victims (Leerkes, Crockenberg, & Burrous, 2004).

The present study

The aim of the present study was to investigate the effect of relationships and maternal age on intergenerational risk for neglect in a high-risk sample—adolescent mothers with infants. Specifically, we examined whether positive care in childhood, social support while parenting, and older maternal age at birth moderated the association between young mothers’ childhood history of abuse and neglect and neglect of their own infants. Because a prevention-based approach to research suggests that early indicators of risk also require attention, we also examined maternal lack of empathy as a correlate of infant neglect risk. In light of prior findings (Ertem et al., 2000; Thornberry et al., 2012), we expected that a maternal history of childhood maltreatment would be associated with more likelihood of infant neglect and less likelihood of parental empathy, but that the majority of mothers who were victims of childhood maltreatment would not neglect their children. We also hypothesized that older age, positive childhood care, and access to frequent, reliable social support would moderate cycles leading to infant neglect.

Method

Sample and procedures

The sample consisted of 447 young mothers who participated in an evaluation of [program name], a newborn home visiting program available to all first-time young parents (<20 years at childbirth) in the state of [state name]. Based on the Healthy Families America (HFA) model, the program provides parenting support, information, and services to young parents beginning prenatally and continuing until the child’s third birthday. The program goals are: (1) to prevent child abuse and neglect by supporting positive, effective parenting; (2) to achieve optimal health, growth, and development in infancy and early childhood; (3) to encourage educational attainment, job, and life skills among parents; (4) to prevent repeat pregnancies during the teen years; and (5) to promote parental health and well-being.

The evaluation was a three-wave, mixed methods study with a randomized controlled trial design. Participants were recruited from eight sites across the state. The eight sites were selected based on three criteria: (a) represented each of the Department of Health and Human Services regions in the state; (b) they offered a mix of urban and exurban/suburban communities with diverse populations; and (c) each was large enough to accommodate evaluation enrollment within a 6-8 month period. Recruitment and data collection began in February 2008. Once recruited from each site, participants were interviewed at three time points (Time 1-Time 3) over two years. This study used data from Time 1 (T1) (shortly after program enrollment) and Time 2 (T2) (one year later).
Every eligible referral (female, 16 years or older, new to the program, either English- or Spanish-speaking, and cognitively able to provide informed consent) was asked to participate in the study. Participants were included in the study sample if they agreed to: (a) participate in three interviews over two years; (b) receive home visits by researchers; and (c) release social service agency records. Mothers who agreed to these conditions were randomly assigned either to the Home Visiting Services Group (HVS; program group), or the Referrals and Information Only Group (RIO; control group) by the central home visiting program office. As incentive to participate, mothers were given gift cards to local stores (HVS participants received $35 at Time 1, $40 at Time 2, and $45 at Time 3; RIO participants received $15 more than HVS participants at each time point in order to keep them engaged in the study despite receiving no home visiting services).

A total of 806 mothers enrolled in the study and agreed to a single telephone interview; 475 (68.54%) agreed to participate in the full study (Integrative Study). Within a day or two of the participant’s assignment to a study group, a trained research assistant (overseen by a Research Coordinator) contacted the participant to explain the study procedure. Every participant who consented to the evaluation was asked to sign a consent form to access her administrative data from state agencies, including the Massachusetts Department of Public Health and the Department of Children and Families (formerly, Social Services).

Mothers who were recruited and gave consent to release their agency data were given the option of participating in a phone interview only (the Intake Interview), or participating in this phone interview and a two-hour Research Visit. Depending on which state she option she selected, the participant was assigned to either the Impact Study (a phone call and access to state agency data) or the Integrative Study (a phone call, access to state agency data, and a research home interview). The Intake Interviews consisted of a 30-min semi-structured phone interview. Home research visits included a semi-structured interview, completion of written questionnaires, and observations of mother–child interactions. Visits typically lasted 2 h and were used to collect in-depth information about program services (both the home-visiting program and other programs), social relationships and support networks, mothers’ childhood history, and current personal functioning/well-being. Both telephone and home interviews were conducted once per year at the three different time points (Time 1–Time 3). By Time 2, several participants had switched from the Integrative Study to the Impact Study or vice versa, others withdrew from the study altogether, and two participants were removed from the sample following a miscarriage and maternal death, resulting in an Integrative Study n of 447 mothers, which comprised the sample for this study.

The 447 mothers in the sample averaged 18.73 years old upon study enrollment. At the time of the first home interview, 64.21% (n = 287) of mothers were pregnant and 35.79% (n = 160) were parenting. At Time 2, the average age of infants was just under one year old (M = 11.95 months) and ranged from 1.81 to 29.03 months of age. Young mothers in the sample represented similar racial/ethnic diversity to the population of teen parents in the state, 34.90% identifying themselves as White, 31.54% Hispanic, 19.46% Black, 9.84% Multi-racial/ethnic, and 4.25% Other. More than half of mothers (56.60%) reported receiving welfare at Time 2, and the average median block income was $38,453 (SD = 16.95; Range = $7,480–$115,460)1. The majority of mothers (88.14%, n = 394) participated in a parenting program during the evaluation study, whether the current or another home visiting program, Early Intervention, Early Head Start, parenting education classes, or parenting support groups. Sample retention rate was 84%, which represents a low attrition rate for studies on home visiting (Avellar & Silman, 2014); reasons for attrition included residential moves, failure to locate families, maternal loss of child custody, and child death. Equivalence tests were conducted on maternal sociodemographic characteristics (e.g., maternal and child age, race/ethnicity, preferred language, education, employment, program participation) to determine whether sample characteristics changed over time. Only one equivalence test was significant, revealing that mothers who dropped out of the study were more likely to be Spanish speakers.

**Measures**

Control variable were derived from maternal demographic data, information on family resources, and program participation. Young mothers’ childhood history of maltreatment (physical abuse, sexual abuse, neglect) comprised the predictor variables. Moderator variables included a maternal history of positive care in childhood, social support, and maternal age. Infant neglect and maternal empathy were the two study outcome variables assessed in separate analyses.

**Maternal and infant demographics.** We used a continuous variable for maternal age at first birth as well as for infant age at Time 2 (when all mothers in the study had given birth), and a dummy variable for co-residence with grandmother (did/did not live with their own mothers at any time during the study period). To establish racial/ethnic backgrounds of participants, mothers selected choices in two U.S. Census categories: (a) ethnicity (Hispanic/Latina, Not Hispanic/Latina); and (b) race (American Indian/Native American/Alaska Native, East Asian, South Asian, Native Hawaiian/Other Pacific Islander, Black/African American, White, Other). We collapsed the categories to form five groups: Hispanic, Black, Multiracial, Other, and White and used dummy variables, with White as the reference group.

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1 Median block income is the smallest geographic entity for which the decennial census tabulates and publishes sample data and was a preferable measure to self-report by adolescents, as many adolescents did not have detailed knowledge about their family income.
Family resources. To determine mothers’ perception of their family’s access to resources, participants completed the Family Resource Scale (FRS) (Dunst & Leet, 1987), a 30-item standardized self-report measure that assesses the extent to which resources are adequate in households (including food, shelter, financial resources, transportation, health care, and time for the family and self). The FRS uses a 5-point Likert scale (1 = not at all adequate, 5 = almost always adequate) for each resource. Scores were averaged over two points to create a single continuous score. Original internal reliability (Cronbach’s alpha) of the instrument was .92; split-half reliability (Spearman–Brown) was .95; test-retest reliability (2–3 month interval) was .52. The FRS has good construct validity in samples of economically diverse families (Brannan, Manteuffel, Holden, & Heflinger, 2006).

Program participation. We used a dummy variable to indicate whether each participant was randomly assigned to the program group or to the control group. See Easterbrooks et al. (2013) for a discussion of home visiting effects on child maltreatment. In the current analysis, we include program participation as a control variable only, as program effects were not a focus of the current study.

Maternal childhood history of maltreatment. Cumulative records of CPS substantiated cases of abuse and neglect were obtained from the [state agency name], dating from mothers’ birth until approximately T2 data collection. The records provided data on the number of substantiated reports and type of maltreatment (physical abuse, sexual abuse, neglect, congenital drug addiction). Further details were not provided (e.g., subtype, severity, chronicity). We created a dummy variable for each of four different types of maltreatment (1 = history of maltreatment, 0 = no history of maltreatment): neglect only, physical abuse only, sexual abuse only, and multiple type (i.e., two or more types of maltreatment). The cases in which mothers were drug addicted at birth (congenital drug addiction, n = 3) were coded as neglect, as substance-exposed newborns often are considered neglected (DePanfilis, 2006).

Positive care in childhood. Participants’ perceptions of the quality of childhood care they received from their mothers were measured at T2 using the Parental Bonding Instrument (Care subscale) (PBI; Parker, Tupling, & Brown, 1979), which assesses positive care and parental involvement. Participants responded to statements such as “spoke to me in a warm and friendly voice” and “was affectionate to me,” indicating the extent to which the behavior was present prior to age 16. Scores (1 = never, 2 = sometimes, 3 = often) were totaled, resulting in a continuous score (maximum = 36). The care subscale has good test-retest reliability (mean ICC of .78 over 90 months and up to 20 years in nonclinical samples (Wilhelm, Niven, Parker, & Hadzi-Pavlovic, 2005).

Social support. The Personal Network Matrix (PNM; Trivette & Dunst, 1988) was administered at T2 to assess mothers’ support networks. Participants identify sources of social support (e.g., partners, neighbors, friends, therapists, doctors, social service agencies) available through face-to-face, telephone, or group contact. Part I of the PNM establishes the frequency of contact with each source in the past month (1 = not at all, 5 = almost every day); Part 2 assesses the extent to which they could depend upon each source (1 = not at all, 5 = all of the time). Continuous summary scores (frequency, dependability) were used. Reliability and validity for this measure have not been established. The internal consistency scores for social support frequency and dependability in the current study were .67 and .69, respectively.

Maternal age at first birth. See above section on maternal demographics.

Infant neglect. We assessed infant neglect using cumulative records from the state CPS agency prenatally until their most recent report at Time 2 data collection (up to May 2011). We utilized a dummy variable for infant neglect by any perpetrator (1 = substantiated report of neglect but no substantiated reports of abuse; 0 = no substantiated reports of maltreatment of any kind). Six cases of physical abuse (with or without neglect) were removed to maintain “clean” maltreatment categories. No other forms of maltreatment (e.g., sexual abuse, emotional abuse, congenital drug addiction) were reported for infants in the study. We coded alternative response cases with a disposition of “concern” as maltreatment when a family received services (n = 2), but “concern” with no services and “no concern” as non-maltreated (n = 1).

Maternal empathy. Maternal empathy was measured using the “Parental Lack of Empathy Toward the Child’s Needs” subscale of the standardized Adult- Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001). The AAPI-2 was designed to measure parenting attitudes; the “empathy” subscale assesses the extent to which a parent understands and values a child’s developmental needs, expresses negative attitudes about nurturing, recognizes a child’s feelings, and expresses fear of spoiling a child. Mothers indicated their level of agreement with statements such as “Children who receive praise will think too much of themselves” and “Children should keep their feelings to themselves.” Items were scored on a five point Likert scale (1 = strongly agree, 5 = strongly disagree). Responses were converted to Sten scores (1–10) comparing responses to a normal distribution; lower scores reflect higher risk. The AAPI was developed with large, geographically diverse samples of Black and White parents and adolescents; normed versions are available in English and in Spanish. Construct validity and reliability for the empathy subscale (Spearman Brown = .86; Cronbach’s alpha = .85); validity was established with 1,500 adults and adolescents (Bavolek & Keene, 2001).
Analytic plan

To answer research questions, descriptive, bivariate, and multivariate data analyses were running using IBM SPSS 19.0. The significance level was set at \( p = .05 \). Predictor variables were centered (by subtracting the mean from each value) to reduce problems of multicollinearity and to simplify subsequent interpretation of main effects (Dearing & Hamilton, 2006).

Missing data. We used Multiple Imputation (MI) on the entire dataset in SPSS 19.0 to address missing data. Approximately 27.59% of values were missing across the dataset, with the percentage of missing values for individual variables ranging from .00% (substantiated reports of maltreatment) to 44.30% (videotaped observations of maternal sensitivity—a parent–child behavior construct that was not included in the present study but which was part of the larger evaluation dataset and informed the imputation). MI maximizes sample size for variables that have incomplete data by replacing missing values several times based on observed variables, and then generates “pooled” results for data analyses based on “Rubin’s rules” (Rubin, 1987). MI has advantages over other methods such as introducing random error, allowing for unbiased estimates of parameters, and providing good estimates of the standard errors (Allison, 2002; Rubin, 1987). A prerequisite condition of using MI is that the data are missing at random (MAR) (Rubin, 1987). Little’s MCAR test was 37.44 (df = 5177; \( p = 1.00 \)), demonstrating no identifiable patterns in the missing data. We used one imputation for each percent of missing values (Bodner, 2008), resulting in 30 imputed datasets.

Data analysis. The first step in data analysis was to generate descriptive statistics and distributions for all predictor and outcome variables. Bivariate analysis tested associations between pairs of study variables using the appropriate statistical technique (Pearson’s correlations, t-tests, or bivariate regression). We used hierarchical multiple regression to test relations with continuous dependent variables and hierarchical logistic regression to test relations with dichotomous dependent variables. In the first model (Model 1), control variables were entered alone in a single block. In the second model (Model 2), we entered maternal childhood variables (maltreatment and positive care) along with control variables. In the third model (Model 3), we tested control variables and the two social support variables. In the fourth model (Model 4), we entered all control variables, maternal childhood variables, and social support variables together. The fifth and final model (Model 5) tested the effect of all independent variables and interactions (moderators) together on parenting outcomes. A fifth model was not included in the results when interactions were found to be nonsignificant. Regression analyses were run separately to examine potential moderating effects for the three most common types of maternal childhood history of maltreatment (neglect, physical abuse, multiple type).

Results

Unless a maltreatment type is referred to as “multiple maltreatment,” only one form of maltreatment has occurred. For example, when a rate of “neglect,” is reported, no other forms of maltreatment aside from neglect occurred, whereas “multiple maltreatment” refers to any combination of maltreatment types. The rate of sexual abuse in the sample is reported but excluded from analysis, as young mothers are not typically perpetrators of sexual abuse.

Child maltreatment in the sample

Less than half of young mothers (46.09%, \( n = 206 \)) had substantiated cases indicating a history of childhood maltreatment. Neglect occurred most often (25.50%, \( n = 114 \)), followed by multiple type (16.33%, \( n = 73 \)), physical abuse (3.36%, \( n = 15 \)), and sexual abuse (9.0%, \( n = 4 \)). Fewer infants were maltreated than were their mothers: 79 infants (17.67%) were maltreated, all cases of neglect. Six infants also were physically abused (i.e., multiply maltreated). There were no cases of sexual or physical abuse alone. The results revealed intergenerational cycles of maltreatment, but a strong trend of discontinuity. Over three-quarters (76.70%, \( n = 158 \)) of the 206 mothers with a history of substantiated childhood maltreatment had infants who did not experience neglect. However, a history of substantiated intergenerational maltreatment was common—almost two-thirds (60.76%, \( n = 48 \)) of the mothers of maltreated infants were identified as victims during their own childhoods. Approximately 60.27% (\( n = 44 \)) of mothers of neglected infants (\( n = 73 \)) were maltreated, and the proportion differed significantly by whether mothers did or did not have a history of maltreatment, \( \chi^2(1, 447) = 7.38, p = .007 \).

Infant neglect risk

Binary logistic regression analyses confirmed several hypothesized associations with infant neglect. Maternal history of multiple type maltreatment predicted infant neglect. Specifically, infants born to mothers who had been multiply maltreated in childhood were more than 2.5 times (OR = 2.61, \( p = .004 \)) as likely to be neglected as were children of nonmaltreated mothers. A nonsignificant trend emerged for childhood neglect (OR = 1.77, \( p = .062 \)). Infants whose mothers reported frequent social support were 6% less likely to be neglected (OR = .94, \( p = .002 \)). Positive maternal care histories did not predict infant neglect.
Regression models describing the relation between a maternal history of childhood neglect and infant neglect (n = 447).

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (SE)</td>
<td>95% CI</td>
<td>OR (SE)</td>
<td>95% CI</td>
<td>OR (SE)</td>
</tr>
<tr>
<td>Intercept</td>
<td>.18 (.57)**</td>
<td>.06–.54</td>
<td>.11 (.72)**</td>
<td>.03–.46</td>
<td>.17 (.58)**</td>
</tr>
<tr>
<td>Maternal age</td>
<td>.96 (.11)</td>
<td>.78–1.19</td>
<td>.86 (.13)</td>
<td>.66–1.11</td>
<td>.94 (.11)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.52 (.33)*</td>
<td>.27–.98</td>
<td>.46 (.41)</td>
<td>.21–1.04</td>
<td>.56 (.34)</td>
</tr>
<tr>
<td>Black</td>
<td>.44 (.40)</td>
<td>.20–.98</td>
<td>.51 (.48)</td>
<td>.20–1.32</td>
<td>.48 (.41)</td>
</tr>
<tr>
<td>Multiracial</td>
<td>.63 (.52)</td>
<td>.16–3.10</td>
<td>.46 (.59)</td>
<td>.14–1.45</td>
<td>.45 (.53)</td>
</tr>
<tr>
<td>Other</td>
<td>.92 (.61)</td>
<td>.28–3.03</td>
<td>.55 (.80)</td>
<td>.12–2.62</td>
<td>.97 (.62)</td>
</tr>
<tr>
<td>Infant age</td>
<td>1.05 (.02)</td>
<td>1.00–1.10</td>
<td>1.04 (.03)</td>
<td>.98–1.09</td>
<td>1.04 (.02)</td>
</tr>
<tr>
<td>Grandmother</td>
<td>.99 (.27)</td>
<td>.58–1.69</td>
<td>.71 (.33)</td>
<td>.37–1.37</td>
<td>1.00 (.28)</td>
</tr>
<tr>
<td>Family resources</td>
<td>1.0 (.01)</td>
<td>.98–1.01</td>
<td>1.00 (.01)</td>
<td>.98–1.02</td>
<td>1.00 (.01)</td>
</tr>
<tr>
<td>Program participation</td>
<td>.58 (.27)</td>
<td>.58–1.65</td>
<td>1.32 (.32)</td>
<td>.71–2.47</td>
<td>.99 (.27)</td>
</tr>
<tr>
<td>Childhood neglect</td>
<td>– –</td>
<td>– –</td>
<td>1.56 (.33)</td>
<td>.82–2.97</td>
<td>– –</td>
</tr>
<tr>
<td>Childhood positive care</td>
<td>– –</td>
<td>– –</td>
<td>.98 (.03)</td>
<td>.93–1.05</td>
<td>– –</td>
</tr>
<tr>
<td>Social support frequency</td>
<td>– –</td>
<td>– –</td>
<td>.94 (.03)</td>
<td>.89–.99</td>
<td>.94 (.03)</td>
</tr>
<tr>
<td>Social support dependability</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>1.01 (.02)</td>
<td>.97–1.04</td>
</tr>
<tr>
<td>Childhood neglect × Maternal age</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
</tr>
<tr>
<td>Childhood neglect × Positive care</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
</tr>
<tr>
<td>Social support frequency × Social support frequency</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
</tr>
<tr>
<td>Social support frequency × Social support dependability</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
<td>– –</td>
</tr>
</tbody>
</table>

Mean – 2LL (range) | 381.86 (328.14–384.47) | 259.90 (188.45–263.19) |
Mean Wald p-value (range) | 2.53 (0.00–12.27) | 1.73 (0.00–11.27) |
ΔMean – 2LL | – | 121.96 |
df | 9 | 17 |
Δdf | – | 8 |

Note. Nagelkerke R² for Model 5 (average) = .14; *p < .05; **p < .01; ***p < .001; compared to Model 1 (control variables only).

Logistic regression analysis predicting infant neglect

Results of logistic regression analyses predicting infant neglect when mothers had a childhood history of neglect are presented in Table 1. Frequency of social support significantly predicted infant neglect (OR = .94, p = .033) (Model 4). When interaction effects were included (Model 5), social support (OR = .92, p = .038) maintained significance. Increased frequency of contact between mothers and members of their social support network was associated with lower likelihood of infant neglect. For each point increase in social support frequency, infants had 6% less likelihood of being neglected. As shown in Fig. 1, we found a significant interaction between maternal childhood neglect and maternal age (OR = .57, p = .033). When controlling for other variables, the probability of having a substantiated case of infant neglect increased slightly with age among mothers with no history of childhood maltreatment; there was no effect of age on infant neglect among mothers.

Fig. 1. Interaction plot of infant neglect by maternal history of neglect across different maternal ages at first birth (n = 447).
who had a history of neglect. Across differences in maternal age at birth, the odds of infant neglect were slightly higher for nonmaltreated mothers than for neglected mothers. The effect size was small (Mean Nagelkerke $R^2 = .14$).

The logistic regression analysis predicting infant neglect by maternal history of childhood multiple maltreatment also yielded significant results (Table 2, Model 4). Controlling for all other variables in the model, a mother’s history of multiple maltreatment was significantly related to infant neglect (OR = 2.68, $p = .008$). Infants whose mothers experienced multiple forms of maltreatment in childhood were more likely to be neglected compared to infants of nonmaltreated mothers. A comparable analysis with a maternal childhood history of physical abuse was nonsignificant.

### Multiple regression analysis predicting maternal empathy

We used multiple regression to explore the relation between a maternal history of childhood neglect and maternal empathy, including possible moderators (Table 3, Model 5). Social support frequency moderated the relation between maternal

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**Table 2**

Regression models describing the relation between a maternal history of childhood multiple maltreatment and infant neglect ($n = 447$).

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (SE)</td>
<td>95% CI</td>
<td>OR (SE)</td>
<td>95% CI</td>
</tr>
<tr>
<td>Intercept</td>
<td>.18 (.57)**</td>
<td>.06–.54</td>
<td>.08 (.75)**</td>
<td>.02–.36</td>
</tr>
<tr>
<td>Maternal age</td>
<td>.96 (.12)</td>
<td>.78–1.19</td>
<td>1.14 (.14)</td>
<td>.87–1.50</td>
</tr>
<tr>
<td>Hispanic</td>
<td>.52 (.33)**</td>
<td>.27–.98</td>
<td>.57 (.41)</td>
<td>.26–1.26</td>
</tr>
<tr>
<td>Black</td>
<td>.44 (.40)</td>
<td>.20–.98</td>
<td>.35 (.53)</td>
<td>.12–.99</td>
</tr>
<tr>
<td>Multiracial</td>
<td>.43 (.52)</td>
<td>.16–1.18</td>
<td>.54 (.69)</td>
<td>.14–1.45</td>
</tr>
<tr>
<td>Other</td>
<td>.92 (.61)</td>
<td>.28–3.03</td>
<td>1.38 (.78)</td>
<td>.30–6.32</td>
</tr>
<tr>
<td>Infant age</td>
<td>1.05 (.02)</td>
<td>1.00–1.10</td>
<td>1.07 (.03)</td>
<td>1.01–1.13</td>
</tr>
<tr>
<td>Grandmother co-residence</td>
<td>1.00 (.27)</td>
<td>.58–1.69</td>
<td>1.29 (.36)</td>
<td>.64–2.59</td>
</tr>
<tr>
<td>Family resources</td>
<td>.59 (.01)</td>
<td>.58–1.01</td>
<td>.59 (.01)</td>
<td>.57–1.01</td>
</tr>
<tr>
<td>Program participation</td>
<td>.98 (.28)</td>
<td>.58–1.71</td>
<td>.94 (.34)</td>
<td>.48–1.81</td>
</tr>
<tr>
<td>Childhood maltreatment</td>
<td>–</td>
<td>–</td>
<td>2.77 (.37)**</td>
<td>1.35–5.68</td>
</tr>
<tr>
<td>Childhood positive care</td>
<td>–</td>
<td>–</td>
<td>.99 (.03)</td>
<td>.93–1.05</td>
</tr>
<tr>
<td>Social support frequency</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Social support dependability</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

- Mean – 2LL (Range): 381.86 (328.14–348.47) 239.66 (173.44–242.23)
- Mean Wald p-value (Range): 2.53 (.00–12.27) 2.48 (.00–14.76)
- ΔMean – 2LL: 142.20
- df: 9 17
- Δdf: 8

Note: Nagelkerke $R^2$ for Model 5 (average) = .14; ‘*p < .05; ‘**p < .01; ‘***p < .001.’ Compared to Model 1 (control variables only).

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**Table 3**

Regression models describing the relation between a maternal history of childhood neglect and maternal empathy ($n = 447$).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1 B (SE)</th>
<th>Model 2 B (SE)</th>
<th>Model 3 B (SE)</th>
<th>Model 4 B (SE)</th>
<th>Model 5 B (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.73 (.50)</td>
<td>.79 (.50)</td>
<td>1.07 (.42)</td>
<td>.80 (.50)</td>
<td>.73 (.50)</td>
</tr>
<tr>
<td>Maternal age</td>
<td>−.17 (.11)</td>
<td>−.15 (.09)**</td>
<td>−.18 (.08)**</td>
<td>−.14 (.09)</td>
<td>−.17 (.11)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>−.76 (.28)**</td>
<td>−.78 (.28)**</td>
<td>−.88 (.24)**</td>
<td>−.84 (.28)**</td>
<td>−.76 (.28)**</td>
</tr>
<tr>
<td>Black</td>
<td>−.60 (.31)</td>
<td>−.66 (.30)</td>
<td>−.65 (.27)</td>
<td>−.71 (.30)</td>
<td>−.60 (.31)</td>
</tr>
<tr>
<td>Multiracial/ethnic</td>
<td>−.36 (.55)</td>
<td>−.29 (.39)</td>
<td>−.32 (.33)</td>
<td>−.35 (.39)</td>
<td>−.36 (.55)</td>
</tr>
<tr>
<td>Other</td>
<td>−.96 (.49)</td>
<td>−.87 (.55)</td>
<td>−.98 (.50)</td>
<td>−.94 (.55)</td>
<td>−.96 (.55)</td>
</tr>
<tr>
<td>Infant age</td>
<td>−.02 (.02)</td>
<td>−.03 (.02)</td>
<td>−.04 (.02)</td>
<td>−.02 (.02)</td>
<td>−.02 (.02)</td>
</tr>
<tr>
<td>Grandmother co-residence</td>
<td>−.14 (.23)</td>
<td>−.12 (.22)</td>
<td>−.04 (.19)</td>
<td>−.11 (.23)</td>
<td>−.14 (.23)</td>
</tr>
<tr>
<td>Family resources</td>
<td>.01 (.01)</td>
<td>.01 (.01)</td>
<td>.01 (.01)</td>
<td>.01 (.01)</td>
<td>.01 (.01)</td>
</tr>
<tr>
<td>Program participation</td>
<td>−.04 (.22)</td>
<td>−.09 (.19)</td>
<td>−.05 (.22)</td>
<td>−.31 (.24)</td>
<td>.34 (.24)</td>
</tr>
<tr>
<td>Childhood neglect</td>
<td>−.29 (.24)</td>
<td>−</td>
<td>−</td>
<td>.31 (.24)</td>
<td>.34 (.24)</td>
</tr>
<tr>
<td>Childhood positive care</td>
<td>−</td>
<td>−.01 (.02)</td>
<td>−</td>
<td>−</td>
<td>.01 (.02)</td>
</tr>
<tr>
<td>Social support frequency</td>
<td>−</td>
<td>−</td>
<td>.03 (.02)</td>
<td>.03 (.02)</td>
<td>.00 (.02)</td>
</tr>
<tr>
<td>Social support dependability</td>
<td>−</td>
<td>−</td>
<td>−.02 (.01)</td>
<td>.01 (.01)</td>
<td>.01 (.02)</td>
</tr>
<tr>
<td>Childhood neglect × Positive care</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−.06 (.05)</td>
</tr>
<tr>
<td>Childhood neglect × Maternal age</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>.04 (.18)</td>
</tr>
<tr>
<td>Childhood neglect × Social support frequency</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>.08 (.04)</td>
</tr>
<tr>
<td>Childhood neglect × Social support dependability</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−.06 (.03)</td>
</tr>
</tbody>
</table>

Note. Model 5 adjusted $R^2$ (average) = .06; ‘*p < .05; **p < .01.'
childhood history of neglect and maternal empathy ($B = .08, p = .037$). As hypothesized, for mothers who were neglected, frequent social support was associated with higher levels of empathy, whereas for mothers without a history of maltreatment, the effect of social support had no detectable impact on empathy. Empathy was higher for neglected mothers than for nonmaltreated mothers across levels of social support frequency (Fig. 2). Similar analyses for a maternal history of physical abuse and multiple maltreatment were not significant.

**Discussion**

The central aim of the investigation was to add to a scant empirical literature on the etiology of infant neglect (Mersky, Berger, Reynolds, & Gromoske, 2009). In doing so, we found Relational Developmental Systems (Lerner et al., 2013) and resilience approaches (Masten & Powell, 2003) to be useful in highlighting the contributions of risk and protective factors to observed patterns of continuity and discontinuity in intergenerational cycles of maltreatment.

A young mother’s childhood history of abuse and neglect was a salient risk factor for infant neglect. We found a main effect for a maternal childhood history of multiple maltreatment on the likelihood of infant neglect and a moderation effect (maternal age) for a maternal childhood history of neglect on the odds of infant neglect. Nevertheless, the majority of adolescent mothers who were maltreated had not continued a pattern of maltreatment with their children. Our study results thus support the notion of “cycles of maltreatment” (Kaufman & Zigler, 1987) while affirming our hypothesis that most young mothers would not perpetuate the cycle (Borkowski et al., 2007). The pervasiveness of childhood histories of abuse and neglect among mothers in the study sample (46%) and their infants (20%) is in line with prior research showing that teen mothers, and their children, commonly have childhood histories of maltreatment (Hildyard & Wolfe, 2002; Krpan, Coombs, Zina, Steiner, & Fleming, 2005). These rates are alarming given that most infants have a limited number of primary caregivers from whom they receive the care they need. Further, as children grow older, the proportion who are maltreated is likely to increase. These early legacies can have a toxic influence on children’s lifelong physical and mental health (Shonkoff et al., 2009).

**Correlates of intergenerational cycles of child maltreatment**

Our study documents several areas of linkage between mothers’ immediate and distal contexts and the neglect of their children; specifically, their childhood histories of maltreatment, social support in their current networks, and their empathic attitudes about parenting. Approximately three-quarters of neglected infants had a mother who was a victim of maltreatment in childhood, yet the rate of discontinuity in the sample was 77%, demonstrating resilience to transmission of maltreatment in these young families comparable to Kaufman and Zigler’s (1987) estimate of 70%. The proportion of discontinuity at this stage of development (<30 months) is noteworthy because most child neglect occurs during the infant and toddler years (U.S. Department of Health, Administration for Children & Families, Children’s Bureau, 2013; Sedlak et al., 2010).

Mothers who were childhood victims of more than one type of maltreatment had infants who were at heightened risk for neglect. Their children had 2.5–3 times the likelihood of being neglected compared to the children of nonmaltreated mothers. According to social learning, and attachment, theoretical perspectives, young mothers who were maltreated in multiple ways may not have observed healthy parenting (Pears & Capaldi, 2001), forming dysfunctional working models of relationships that fail to support positive parenting behavior (Bowlby, 1958). Although multiple maltreatment exposure is predictive of psychological distress, adjustment problems, and psychiatric impairment (Arata, Langhinrichsen-Rohling,
Bowers, & O’Brien, 2007; Finkelhor, Ormrod, & Turner, 2007), to our knowledge no other studies have examined multiple type victimization in one generation and neglect in the next.

The relation between social support and parenting quality was a key finding in this study, offering further evidence of the impact of relationships on neglect risk (Dixon et al., 2009; Thompson, 1995; Zolotor & Runyan, 2006). Social support served as a buffer against infant neglect, promoting resilience, i.e., breaking the intergenerational cycle of maltreatment (Armstrong et al., 2005). Because the effects of social support tend to be population specific, depend upon the type and quality of support, and vary by developmental timing, a nuanced understanding of what forms of social support work best, for whom, and under what conditions is essential to protecting children. We examined two different dimensions of social support (frequency and dependability); interestingly, frequent access to social support was more important to parenting than was the dependability of support. Perhaps frequency is salient to young mothers’ parenting because it represents the degree to which their immediate practical and emotional needs are met. Further, young mothers are not passive recipients of support, and the dimension of frequency may be a measure of their success in procuring help (Thompson, 1995).

Mothers with more empathetic attitudes reported more adequate family resources, echoing findings that access to resources enhances parenting quality (Sedlak et al., 2010; Slack et al., 2004). Surprisingly, older mothers reported less paternal empathy than did younger mothers in our sample (age range of 16 to 20 years at first birth), which was unexpected given evidence that young parents display less empathy in interactions with their children than do adult parents (Baranowski, Schilmoller, & Higgins, 1990). We speculate that a negative relation between older age and co-residence with grandparents may explain this finding, as very young mothers may have more support from immediate family (Moore & Brooks-Gunn, 2002). However, this hypothesis requires further exploration and warrants future study.

Moderators of intergenerational cycles of maltreatment linked to infant neglect

The main objective of the current study was to identify modifiable factors that protect adolescent mothers against continuing cycles of child maltreatment. Maternal age and social support moderated the relation between maternal histories of childhood maltreatment and parenting, whereas positive relationships in childhood did not. In light of considerable empirical support for the promotive effect of positive childhood relationships on parenting quality (Belsky et al., 2009), the non-significant finding for positive care during childhood was puzzling. It may be that adolescents felt that their mothers did the best they could under difficult circumstances (i.e., they were “caring” albeit maltreating). An attachment theoretical perspective might suggest that such cognitive reappraisals might be crucial to interrupting cycles of insensitive parenting (Egeland et al., 1988). Investigations in a recent special issue on safe, stable, and nurturing relationships as moderators of intergenerational cycles of maltreatment found mixed results, including three studies “with a significant association between protective constructs and attenuation in the continuity of maltreatment” but one study that failed to find an effect (Merrick, Leeb, & Lee, 2013, p. 52). Herrenkohl, Bart Klika, Brown, Herrenkohl, and Leeb (2013) speculated that particular indicators of positive relationships in childhood may be more salient than others, including specific aspects of attachment and support, stability of relationships over time, overall levels of warmth and support provided, and child characteristics (e.g., temperament, emotion regulation, social acuity).

Findings on the impact of maternal age on cycles of maltreatment suggested that, even within a restricted range, a parent’s age at birth has relevance to an infant’s risk of neglect. Contrary to our prediction, however, older age did not buffer against the risk of infant neglect among mothers who themselves had been neglected, and the odds that a mother had a substantiated report of infant neglect were slightly higher for nonmaltreated mothers who were older at the time of a first birth. The latter finding represents a small effect, but it is difficult to explain in light of research demonstrating elevated risk for child maltreatment among younger mothers (Sidebotham & Golding, 2001; Stier et al., 1993) and among maltreated parents (Ertém et al., 2000; Kaufman & Zigler, 1987). One explanation may be that mothers who were victims of neglect may be better able to transform their experiences into a conscious resolve not to repeat the cycle (Egeland, 1988) than mothers who endured multiple types of maltreatment, whose capacity to overcome the legacy of abuse and neglect may be compromised by the extent of their trauma.

The effects of social support on continuity and discontinuity in cycles of child maltreatment also varied under different conditions. Social support moderated the relation between past experiences of neglect and maternal empathy. Neglected mothers who reported frequent access to social support held more empathetic attitudes toward their children than did neglected mothers with less support, consistent with Egeland et al.’s investigation (1988). This finding highlights the fundamental contribution of supportive relationships to healthy parenting following adversity (Lieberman et al., 2005; Werner, 2000) and affirms the study’s premise that social support enhances resilience in parenting subsequent to childhood maltreatment.

Implications for the prevention of child neglect

The extent of discontinuity in intergenerational cycles of child maltreatment, even in this high risk sample of young mothers, raises an important question: Why is our understanding of discontinuity so limited when it is the most usual and desired outcome? When working with victims of child maltreatment, Lieberman et al. (2005) recommend a therapeutic stance in which “experiences of joy, intimacy, pleasure, and love are considered to be as worthy of therapeutic attention as negative experiences” (p. 517).
In the present study, frequent access to social support protected infants from neglect, suggesting that prevention policy and programs consider strategies to help teen parents establish regular social contact with others (e.g., home visiting, parent groups, community opportunities for socialization). While social support is a cornerstone of many prevention programs, general strategies to increase social support, even when based on strong empirical and theoretical grounds, are unlikely to reduce neglect unless they address the specific needs of particular families (Daro & Dodge, 2009). Further research might expand our understanding of which forms of social support (e.g., tangible, informational, emotional), from whom (e.g., professionals, paraprofessionals, family, friends), are most likely to protect against neglect for which families.

The results of this study also suggest that prevention policy and practice consider the contextual specificity of protective processes (Wright & Masten, 2006). The fact that social support and older maternal age operated differently for parents with and without a childhood history of maltreatment implies that “one-size-fits-all” approaches to prevention may fail short of their goals. Refining knowledge on how protective processes operate in different settings will enhance targeted prevention strategies (Stagner & Lansing, 2009; Wulczyn, 2009).

Study limitations and conclusions

Certain limitations merit particular consideration when interpreting the results of this investigation. Our categorization of situations as “neglect” or “nonmaltreatment” does not account for dimensions such as chronicity and severity. Also, we used a conservative standard for both infant neglect and maternal history of childhood maltreatment (i.e., substantiated reports), likely leading to an underestimate of maltreatment. Still, we addressed a serious limitation of prior studies by analyzing different forms of maltreatment in each generation. Another limitation was that we were not able to incorporate some correlates of neglect that may help to explain continuity (e.g., substance abuse, intimate partner violence, limited community resources) and discontinuity (e.g., a supportive non-parental adult, psychotherapy) and play a causal role in neglect (Erickson & Egeland, 2002). In addition, our measures of mothers’ childhood maltreatment and positive care were limited to retrospective self-report, as we were not able to follow mothers prospectively during childhood, and we assessed maternal empathy via self-report rather than observing empathy directly. Despite these limitations, this study contributes to the field of child maltreatment prevention in several ways. First, it addresses the “neglect of neglect” (Dubowitz, 2007) by adding to a scant empirical literature on intergenerational cycles of neglect. Second, in contrast to most studies on intergenerational transmission, this investigation highlighted discontinuity and its applications to prevention of neglect. Lastly, the finding that social support and maternal age moderated intergenerational transmission of parenting suggests avenues for intervention.

There is unrealized potential for researchers to assist infant neglect prevention efforts by identifying protective factors that prevent infant neglect from occurring and by pinpointing optimal foci for interventions aimed at strengthening families. The inextricable link between children’s adjustment and parents’ psychological well-being (Easterbrooks, Driscoll, & Bartlett, 2008) suggests that children’s ability to achieve safety, security, love, and belonging (Maslow, 1943) depends on how well society fulfills the social-emotional needs of parents, beginning during the prenatal and early postnatal period. Most importantly, preventing neglect will necessitate cross-disciplinary collaboration among researchers, scientists, policymakers, practitioners, and other stakeholders to translate empirical findings into policy and practice that improves the lives of young children and their families.

References


