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Emotion Regulation, Harsh Parenting, and Teacher Sensitivity Among Socioeconomically Disadvantaged Toddlers in Child Care

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ABSTRACT

This study examined the transactional nature of harsh parenting and emotion regulation across toddlerhood, including the moderating role of teacher sensitivity in child care. Secondary data analyses were conducted with a subsample of families from the Early Head Start Research and Evaluation Project who participated in center-based child care. Autoregressive cross-lagged path models were used to examine stability and transactional associations between observations of mothers’ harsh parenting behaviors and observers’ ratings of toddler emotion regulation at 14, 24, and 36 months. Teacher sensitivity was observed in children’s child care classrooms and was hypothesized to attenuate the negative impact of harsh parenting on subsequent emotion regulation. Results suggested that poorer emotion regulation and increased harsh parenting at 14 months were particularly salient in setting the stage for worse parent and toddler outcomes at 36 months. Teacher sensitivity was not a significant protective factor.

Practice or Policy: Results are discussed in terms of the importance of early parent–toddler interactions that match the developing regulatory needs of young toddlers as well as considering how teacher sensitivity is conceptualized and measured so programs such as Early Head Start can best meet the needs of socioeconomically disadvantaged parents and toddlers.

Emotion regulation involves the cognitive and behavioral management of emotional arousal emotional expression (Eisenberg, Hofer, & Vaughan, 2006), and parent–toddler interactions provide a relational context within which toddlers gain this skill. Toddlerhood is an important time for the development of emotion regulation, as toddlers are transitioning from external forms of regulation (e.g., soothing from a caregiver or special toy) to gaining internal regulatory control (Calkins & Hill, 2006). Young children who can effectively regulate their emotions are more likely to demonstrate increased social competence, demonstrate emotional understanding and empathy toward others, and have more positive peer relationships (Blair, Berry, & Friedman, 2012; Calkins & Hill, 2006; Eisenberg et al., 2006; Liew, 2012). In elementary school, well-regulated children are better positioned to build positive relationships with teachers, pay attention in the classroom, and show increased academic achievement (Blair, 2002; Blair et al., 2012; Graziano, Calkins, & Keane, 2011). Parents foster emotion regulation with actions that are sensitive and positive (Bocknek, Brophy-Herb, & Banerjee, 2009). Alternatively, harsh actions characterized by negativity and control may actually threaten the development of emotion regulation (Calkins, Smith, Gill, & Johnson, 1998; Egeland, Pianta, & O’Brien, 1993; Snyder, Stoolmiller, Wilson, & Yamamoto, 2003). Given the transactional nature of parent–child interactions (e.g., Sameroff, 2009), toddlers who struggle with
emotion regulation pose greater caregiving challenges and thus may elicit increasingly harsh responses from parents. Transactions of this nature risk entrenching parents and toddlers in coercive cycles (Gershoff, Aber, & Clements, 2009; Scaramella & Leve, 2004); however, little research has examined this issue related to harsh parenting and emotion regulation in toddlerhood.

Toddlers living in poverty face added risks to these processes. The stress associated with socio-economic disadvantage threatens both healthy parent–child interactions and toddlers’ developmental outcomes (Bradley & Corwyn, 2002; Conger & Donnellan, 2007). For these children, however, quality experiences with sensitive teachers in child care may serve as a developmental asset (Love et al., 2005). The extant research has documented protective effects of teacher sensitivity (e.g., Burchinal & Cryer, 2003); however, there is limited research on its association with toddler emotion regulation, especially operating as protective factor against harsh parenting in socioeconomically disadvantaged families (Mortensen & Barnett, 2015). These potential associations are especially relevant to intervention programs, such as Early Head Start (EHS), that aim to nurture young children’s emotional well-being through early care and education in the context of socioeconomic risk.

Thus, the aim of the present study was to examine transactional associations between harsh parenting behaviors and emotion regulation across toddlerhood (14–36 months) in a sample of EHS (participating and eligible) families utilizing center-based child care, including testing teacher sensitivity in child care as a buffer against these associations.

**Harsh parenting and emotion regulation**

The construct of harsh parenting encompasses behaviors that are negative, punitive, and controlling toward young children (e.g., Fabes, Leonard, Kupanoff, & Martin, 2001). These types of behaviors undermine emotion regulation by leaving toddlers unsupported in managing emotional arousal and placing undue restrictions on their burgeoning autonomy. The extant research in this area typically focuses on parent-driven effects, primarily effects driven by mothers. It is important to note that although most research examined here has studied mothers’ parenting practices, children’s home ecologies typically contain multiple caregivers. Father support, for example, plays an important role in supporting young children’s socioemotional skills, especially when support from mothers is low (Martin, Ryan, & Brooks-Gunn, 2010). Children are likely a part of multiple relationships that interact to affect emotion regulation outcomes; however, the present study focuses on dyadic mother–toddler relationships.

Evidence from Eisenberg and colleagues has suggested that mothers’ punitive behaviors increase children’s escape or revenge-seeking emotion regulation strategies and anger reactions at school (Eisenberg & Fabes, 1994; Eisenberg, Fabes, Carlo, & Karbon, 1992). Harsh parenting characterized by punitive and dismissive responses to children’s negative emotions has also been associated with intensified emotional expressions, poorer social competence, and intensified anger (Snyder et al., 2003). In a primarily Caucasian, middle-class sample of toddlers, Calkins and colleagues observed that mothers who used negative controlling behaviors with their toddlers during emotion-eliciting play tasks (e.g., restricting the child’s movements or directing the child’s activity) had toddlers who exhibited less adaptive physiological emotion regulation (Calkins et al., 1998) and more distress in response to frustration (Calkins & Johnson, 1998). Disrupted emotion regulation may also be a causal link between harsh parenting and children’s future externalizing and internalizing problems (Blandon, Calkins, & Keane, 2010; Chang, Schwartz, Dodge, & McBride-Chang, 2003; Whiteside-Mansell, Bradley, Owen, Randolph, & Cauce, 2003).

It is important to note that risks are greater for socioeconomically disadvantaged toddlers when poverty-related stressors such as parental mental health and resource scarcity fuel harsh parenting behaviors (Conger, Conger, & Martin, 2010). Mothers dealing with the strain of poverty and neighborhood violence have been shown to use less warmth and instead harsher and more controlling behaviors (Pinderhughes, Nix, Foster, & Jones, 2001; Smith, 2010).
**Parent–child transactional processes**

In contrast to the parent-driven effects described previously, transactional models of development (e.g., Sameroff, 2009) provide a theoretical framework for conceptualizing the reciprocal interactions between parents and toddlers as catalysts for the development of emotion regulation. Just as parents influence toddlers, toddlers elicit responses from parents, with both parties changing over time. According to transactional models, poor emotion regulation theoretically elicits harsher parenting, as parents are forced to respond to children’s escalating emotional needs. This in turn fosters poorer emotion regulation and subsequent harsher parenting, and so on. These patterns risk entrenching parents and children in coercive cycles of interaction, mutually reinforcing one another over time (Scaramella & Leve, 2004). Coercive cycles of interaction characterize transactional processes in which parents and children reinforce negative responses in one another (Scaramella & Leve, 2004).

Little research has considered toddler emotion regulation and harsh parenting specifically, but research on links between parenting and other socioemotional constructs suggests that parent behaviors carry more weight during these transactions than toddler behaviors (Paschall & Mastergeorge, 2015). Stronger parental effects could be due to the developmental nature of toddlerhood, namely, toddlers’ heavy dependence on adult support in managing emotions and behaviors. For instance, evidence from one study suggested that in a sample of EHS families, the influence of supportive parents on toddlers’ interest and persistence during play tasks was stronger than the reciprocal influence of toddlers on parents (Martin, Ryan, & Brooks-Gunn, 2013). Similarly, another study documented aggressive behaviors across toddlerhood, finding that mothers’ lax or overreactive discipline practices escalated toddler aggression over time (Del Vecchio & O’Leary, 2006).

A few studies have considered coercive cycles of harsh parenting during toddlerhood specifically. For example, Scaramella, Sohr-Preston, Mirabile, Robison, and Callahan (2008) observed low-income mothers helping their toddlers clean up toys after a free play task at 12 and 24 months and coded instances of harsh parenting (characterized by controlling, restrictive, and negative behaviors) in response to toddler noncompliance and distress. Harsh parenting was stable across time points, and harsh parenting at 12 months was predictive of toddler distress at 24 months; however, toddler distress at 12 months was unrelated to mothers’ future harsh parenting. Similarly, using interval sampling within structured play tasks, Del Vecchio and Rhoades (2010) determined that after they accounted for stability in both parties’ behaviors, mothers’ harsh parenting and toddlers’ negative emotions (such as whining, crying, and screaming) influenced each other’s subsequent behaviors; however, mothers’ behaviors demonstrated a significantly stronger effect on subsequent child behaviors than vice versa.

In contrast, some evidence points toward the significance of child effects on parenting behavior. For instance, evidence from parental reports of toddler boys’ behavior problems suggested that parenting was a poor predictor of future behavior problems; instead, parental reports of behavior problems were an important predictor of parents’ future ratings of support, psychological control, and physical punishment (Verhoeven, Junger, van Aken, Deković, & van Aken, 2010). Similarly, another study reported that only mid-high initial levels of young children’s externalizing behaviors predict future negative parenting practices, which suggests that fluctuations in children’s behaviors are catalysts for future parenting (Combs-Ronto, Olson, Lunkenheimer, & Sameroff, 2009).

Transactional processes between parenting and emotion regulation have been documented across early to middle childhood (e.g., Eisenberg, Cumberland, & Spinrad, 1998; Eisenberg et al., 1999), but little research has examined toddler emotion regulation specifically. The present study builds on and extends this work by examining the transactional associations between harsh parenting and toddler emotion regulation across three time points (14, 24, and 36 months) in a sample of socioeconomically disadvantaged families utilizing child care. It is important to elucidate the nature of these processes specifically in families in which poverty may exacerbate both harsh parenting practices and emotion regulation problems but teacher sensitivity in child care has the potential to buffer negative effects.
The protective role of teacher sensitivity in child care

Similar to interactions with parents at home, interactions with child care teachers provide a relational context for toddlers’ emotional development (Mortensen & Barnett, 2015). Teacher sensitivity in the classroom can be characterized by frequent warm and positive behaviors that are sensitive to children’s needs and provide gentle, yet firm, guidance (Arnett, 1989). Teacher sensitivity promotes secure attachment relationships with children (Ahnert, Pinquart, & Lamb, 2006), providing a relational context that fosters positive developmental outcomes in the classroom.

Little research has examined links between teacher sensitivity and toddler emotion regulation, partially because emotion regulation has only recently been promoted as a foundational component of school readiness (Blair et al., 2012; Denham, Bassett, & Zinsser, 2012). A great body of literature has demonstrated, however, that sensitive caregiving in child care is associated with related domains such as increased emotional engagement, social competence, and prosocial behaviors, with effects extending from early childhood to adolescence (Burchinal & Cryer, 2003; National Institute of Child Health and Human Development Early Child Care Research Network [NICHD ECCRN], 1998, 2001; Vandell, Belsky, Burchinal, Steinberg, Vandergriff, & NICHD ECCRN, 2010; Vogel, Xue, Moiduddin, Carlson, & Kisker, 2010; Watamura, Phillips, Morrissey, McCartney, & Bub, 2011), and improved emotion regulation is a hypothesized causal mechanism at the heart of these gains (Blair et al., 2012). Moreover, qualitative descriptions of teacher–toddler dyadic interactions have documented the nuanced responses teachers use to scaffold toddlers in managing emotional arousal. For example, Ahn (2005) documented 12 child care teachers’ strategies to help toddlers manage emotions, such as providing verbal reinforcement, providing physical comfort, and scaffolding appropriate negative emotional expression (e.g., “use your words” vs. physical violence). Similarly, Lee (2006) documented the development of teacher–child synchrony as teachers and toddlers altered their behaviors to become more in tune with each other’s emotional cues. These reciprocal interactions align with the types of serve-and-return interactions that are documented as critical to young children’s emotional well-being (Shonkoff & Phillips, 2000).

For socioeconomically disadvantaged families specifically, child care quality (of which teacher sensitivity is a component) has been associated with reduced behavior problems in middle school (Votruba-Drzal, Coley, Maldonado-Carreño, Li-Grining, & Chase-Lansdale, 2010), and quality intervention programs such as EHS are associated with reduced behavior problems and better parent–child interactions (Administration for Children and Families [ACF], 2002). On a related note, multiple studies suggest that quality child care is particularly beneficial for more at-risk children, such as socioeconomically disadvantaged boys (Votruba-Drzal et al., 2010) or children who have mothers with low education levels (Peisner-Feinberg et al., 2001).

Few studies have examined teacher sensitivity as a protective factor against parenting quality in socioeconomically disadvantaged families. For example, in a sample of low-income families, one study found evidence that child care quality (defined as the combination of teacher sensitivity and environmental quality) in early childhood modestly attenuated a negative association between low parental cognitive stimulation in early childhood and children’s behavior problems in middle school (Votruba-Drzal et al., 2004). Another study that utilized a subsample of participants (ranging in income levels) from the National Institute of Child Health and Human Development Study of Early Child Care and Youth Development (NICHD SECCYD) found evidence that caregiver sensitivity (in all nonmaternal child care settings) across infancy and toddlerhood was protective for children’s social behaviors in preschool (Watamura et al., 2011). In that study, children living in homes characterized by low maternal sensitivity and stimulation but highly sensitive child care exhibited few behavior problems and more prosocial behaviors during early childhood compared to children facing the double jeopardy of low-quality home and child care settings. Studies have yet to consider, however, the protective effect of teacher sensitivity, specifically in terms of the deleterious association between harsh parenting and toddler emotion regulation, particularly for families facing the additional risk of living in poverty.
The present study

The present study examined transactional associations between toddler emotion regulation and harsh parenting behaviors across three time points (child age 14, 24, and 36 months) in a sample of socioeconomically disadvantaged families from the Early Head Start Research and Evaluation Project (EHSRE; ACF, 2002). This study focused on families who participated in center-based child care at 14 months (n = 310) and the subsample who continued to participate in center-based care at 24 months (n = 223).

To start, this study examined the reciprocal links between toddler emotion regulation and harsh parenting over time (see Figure 1). It was anticipated that emotion regulation and harsh parenting would be inversely associated across time, which means that after we would account for stability within each construct, more harsh parenting would contribute to poorer emotion regulation from one time point to the next. Likewise, poorer emotion regulation would contribute to more harsh parenting. A variety of covariates were included in all analyses to help isolate the unique associations within and between each construct: child sex, ethnicity, family risk, child negative emotionality, and maternal depression. These covariates were selected based on established empirical associations with emotion regulation and harsh parenting. For example, female children tend to score higher on measures of emotion regulation than male children (Matthews, Ponitz, & Morrison, 2009; Weinberg, Tronick, Cohen, & Olson, 1999), and male children tend to experience harsher parenting (Barnett & Scaramella, 2013). Patterns of mother–toddler behaviors have also been shown to vary in Caucasian, African American, and Hispanic families (Ispa et al., 2004). Demographic risk factors (Conger & Donnellan, 2007) and maternal depressive symptoms (O’Brien Caughy, Huang, & Lima, 2009) were included to isolate the influence of harsh parenting as separate from other family factors that may negatively impact emotion regulation. Finally, toddler negative emotionality was included to account for natural variation in emotion regulation that can be accounted for by differences in temperamental reactivity (S. Kim & Kochanska, 2012).

Next, this study examined whether teacher sensitivity in center-based child care operated as a protective factor (i.e., moderator) against the negative impact of harsh parenting on toddler emotion regulation (see Figure 1). Among the families who participated in 14-month child care, 14-month teacher sensitivity was examined as a moderator of the associations between 14-month harsh parenting and 24-month and 36-month emotion regulation. Among the subsample of families who also participated in child care at 24 months, 24-month teacher sensitivity was included as a moderator of the association between 24-month harsh parenting and 36-month emotion regulation.

Figure 1. Hypothesized path models. (a) 14-month teacher sensitivity moderates associations between 14-month harsh parenting and 24- and 36-month emotion regulation (n = 310). (b) For the subsample (n = 223) who continued to participate in child care at 24 months, 24-month teacher sensitivity also moderates the association between 24-month harsh parenting and 36-month emotion regulation. mos = months.
For all moderation analyses, it was anticipated that inverse associations between harsh parenting and toddler emotion regulation would vary as a function of teacher sensitivity, with high teacher sensitivity protective for toddlers experiencing high harsh parenting. To account for variation in the amount of time children spent with their teachers, all moderation analyses controlled for the number of hours per week children attended child care.

**Method**

**Sample**

Data for this study were from the EHSRE, a longitudinal program evaluation of EHS (ACF, 2002, 2004). EHS is a two-generation early intervention program designed to promote family partnership and child well-being for socioeconomically disadvantaged families with pregnant women, infants, and toddlers. All recruited families met criteria for participation in EHS services and were randomized to program (participating) or control (eligible) groups (N = 3,001). Data were collected in families’ homes at the time of study enrollment, when children were 14, 24, and 36 months old, and in child care centers when applicable. A full report of recruitment, study design, and data collection procedures can be found in ACF (2002, 2004).

The present study included the subsample of families in which the focal child participated in center-based child care. Toddlers were considered to have attended center-based child care as their primary child care arrangement when parents indicated attendance at a center-based facility for at least 10 hr per week. A subsample of toddlers (n = 365) attended center-based child care (hereafter simply referred to as child care) at the 14-month time point. Toddlers with data for only one out of three time points for the main path model variables (emotion regulation and harsh parenting) were excluded, which resulted in a final sample of 310 who attended child care at 14 months. Given the experimental design of the original EHSRE study, this subsample included families from both the program (n = 237) and control (n = 73) groups. Thus, EHS participation was controlled for in all analyses. Toddlers in the program group attended EHS child care centers or were referred by their EHS program to other quality centers in the community, whereas toddlers in the control group attended non-EHS centers that families sought on their own. Toddlers spent an average of 39.36 (SD = 23.43) hours per week in child care.

Approximately 52% (n = 160) of the focal toddlers were female, with 41% reporting as African American, 34% as Caucasian, 20% as Hispanic, and 4% as other. This subsample differed from the EHSRE families who did not participate in child care at 14 months in a few important ways, including having a significantly higher percentage of EHS program families (75% vs. 47%), a significantly higher percentage of African American families (42% vs. 34%), and a lower percentage of Hispanic families (20% vs. 24%): EHS program families, \( \chi^2(1, N=2977) = 98.34, p < .001 \); Hispanic families, \( \chi^2(3, N=2925) = 8.84, p < .05 \). The subsample had on average significantly fewer family risk factors at baseline enrollment (\( M = 2.46, SD = 1.19 \)) than the other families (\( M = 2.66, SD = 1.19 \)) as well as significantly lower reports of 14-month maternal depressive symptoms (\( M = 11.38, SD = 8.77, \) vs. \( M = 13.72, SD = 10.06 \)): family risk factors at baseline enrollment, \( t(2952) = -3.01, p < .01 \); 14-month maternal depressive symptoms, \( t(519.77) = -4.47, p < .001 \). In addition, children in the subsample had significantly higher 24-month emotion regulation scores (\( M = 3.72, SD = 0.78 \)) than children who did not attend child care (\( M = 3.62, SD = 0.80 \)), \( t(1908) = 2.05, p < .05 \).

Within this subsample, 223 toddlers continued to participate in center-based child care at the 24-month time point and were examined in the final analyses. These toddlers differed from the toddlers who attended child care at 14 months by having fewer demographic risk factors (\( M = 2.70, SD = 1.11, \) vs. \( M = 2.30, SD = 1.14 \)), higher 14-month teacher sensitivity (\( M = 3.40, SD = 0.40, \) vs. \( M = 3.22, SD = 0.16 \)), and a significantly higher percentage of toddlers from the EHS program group (82% vs. 24%): demographic risk factors, \( t(307) = 2.74, p < .01 \); 14-month teacher sensitivity, \( t(307) = 2.74, p < .01 \); 14-month teacher sensitivity, \( t(307) = 2.74, p < .01 \).
(302) = −3.38, $p < .01$; percentage of toddlers from the EHS program group, $\chi^2(1, N=310) = 16.21$, $p < .001$.

**Measures**

**Emotion regulation**

Trained observers assessed toddler emotion regulation at 14, 24, and 36 months with the Bayley Scales of Infant Development–II (Bayley, 1993). Observers were blind to each family’s research status. Observers first completed the Bayley Scales of Infant Development–II Mental Development Index by engaging toddlers in a series of developmental play tasks to assess cognitive and language abilities. Directly afterward, observers completed the Bayley Scales of Infant Development–II Behavior Rating Scale to assess toddlers’ emotion regulation and orientation/engagement during the Mental Development Index. Observers responded to 13 items along a 5-point scale, with higher scores indicating more positive behaviors. Seven items made up the Emotion Regulation subscale, assessing the child’s attention, persistence, cooperation, activity level, affect, adaptation, and hyper-sensitivity during the assessment. These items reflect underlying cognitive and behavioral regulation strategies toddlers used to maintain participation in the Mental Development Index assessment and have demonstrated construct validity in a variety of sample populations (Thompson, Wasserman, & Matula, 1996). In the full EHSRE sample, items demonstrated high internal consistency at each time point (Cronbach’s $\alpha > .90$; ACF, 2002). Scores were averaged so that higher scores indicated better emotion regulation.

**Harsh parenting**

At the 14, 24, and 36-month time points, trained observers assessed parenting behaviors with the three-bag task (ACF, 2002, 2004), an observational measure that was originally adapted from the NICHD SECCYD three-box assessment of parent–child interactions (NICHD SECCYD, 1992). Mothers and toddlers participated in a series of 10-min semistructured play tasks in their homes. Mothers were asked to interact with their child as they normally would while playing with a series of toys in three separate bags. Interactions were video recorded and coded for intrusiveness and negative regard toward the child. A trained, independent coding team at the Center for Children and Families at Columbia University coded the video recordings and was trained to maintain an 85% minimum rate of agreement (Brady-Smith, O’Brien, Berlin, Ware, & Fauth, 2000). Coders were blind to each family’s research status. Intrusiveness addressed the extent to which mothers controlled the play agenda, not allowing the child to influence the focus or pace of the play; grabbed toys away from the child; or did not take turns during play. Negative regard addressed mothers’ expressions of discontent, anger, disapproval, or rejection of the child through the use of a negative tone and/or physically harsh behaviors. Each behavior was assigned a score along a 7-point scale, with higher scores indicating greater frequency and intensity of the behavior. Correlations between intrusiveness and negative regard were .39 ($p < .0001$), .57 ($p < .0001$), and .42 ($p < .0001$) at 14, 24, and 36 months, respectively. Scores within each time point were averaged to represent composite scores of harsh parenting at 14, 24, and 36 months, with higher scores representing greater frequency and intensity of harsh parenting behaviors.

**Teacher sensitivity**

Teacher sensitivity was assessed in child care centers at the 14- and 24-month time points with the Caregiver Interaction Scale (Arnett, 1989). Observers were trained by Mathematica Policy Research and were required to meet an 80% minimum rating agreement during training to be certified to collect classroom data (ACF, 2004). For one 2.5-hr observation, trained observers rated instances of teachers’ behaviors from 1 (item is not at all characteristic of this caregiver) to 4 (item is very much characteristic of this caregiver) for 26 items that assessed the extent to which teachers displayed warmth (positive behaviors); were uninvolved and uninterested (detached behaviors); were hostile,
threatening, or critical (punitive behaviors); and were lax toward children’s misbehavior (permissive behaviors). Appropriate items were reverse scored such that all items indicated more favorable behaviors. Items were averaged such that higher scores reflected a higher degree of teacher sensitivity. Internal consistency for the Caregiver Interaction Scale is generally reported as high across all behaviors (Cronbach’s $\alpha > .70$; Colwell, Gordon, Fujimoto, Kaestner, & Korenman, 2013).

Covariates

Demographic characteristics were included as control variables in all analyses. EHS participation was indicated as 1 = program, 0 = control. Child sex was indicated as 1 = male, 0 = female. Ethnicity was reported as Caucasian, African American, Hispanic, or other, which was indicated with three dummy variables with Caucasian as the reference group.

Family risk at baseline was computed based on five dichotomous indicators assessed at baseline enrollment in the study: use of government assistance, adolescent childbearing (of the focal child), unemployment, maternal education less than high school, and single-parent status (ACF, 2002). Families were assigned a score of 1 for each risk factor present. Scores were summed, creating an index of family risk ranging from 0 (no risk) to 5 (high risk).

Maternal depression was assessed at 14 months with the Center for Epidemiologic Studies–Depression scale (Radloff, 1977). Mothers reported on 20 items assessing how many days in the past week they had experienced particular symptoms, including poor appetite, loneliness, sadness, lack of energy, and restless sleep. Mothers indicated responses from 1 (rarely) to 4 (most days). Appropriate items were reverse scored, then items were summed such that higher scores indicated more self-reported depressive symptoms. Internal consistency across all ethnicities was high (Cronbach’s $\alpha > .88$; Love et al., 2005).

Mothers reported the degree of child negative emotionality at 14 months using the Emotionality subscale of the Emotionality, Activity, Sociability, and Impulsivity Temperamental Survey for Children (Buss & Plomin, 1984). Mothers rated their children along a 5-point scale on five items that assessed their children’s tendency to become easily and intensely aroused. Internal consistency for this measure in the EHSRE sample is high (Cronbach’s $\alpha = .72$; Berlin et al., 2009). Appropriate items were reverse scored. Scores were sums such that higher scores reflected a higher degree of negative emotionality.

Hours in child care were reported by mothers at the 14- and 24-month time points and reflected the average number of hours children spent in child care each week.

Analytic strategy

Path model analyses were conducted in Mplus 7.0 with full information maximum likelihood estimation (Muthén & Muthén, 1998–2012). Path analyses allow for the simultaneous estimation of multiple linear associations, including associations that represent stability within a domain (emotion regulation and harsh parenting) as well as transactional associations from one domain to another across multiple time points (Finkel, 1995; Selig & Little, 2012). Stability is represented with autoregressive paths connecting the repeated measures of each domain. Coefficients refer to the relative ranking of cases (i.e., higher scores at Time 1 are associated with higher scores at Time 2), with coefficients closer to 1.0 indicating high stability in individual differences from one time point to the next (Finkel, 1995). Transactional associations are represented with cross-lagged paths connecting one domain to another across time points. In this case, for example, cross-lagged coefficients represent the unique association of harsh parenting at Time 1 with emotion regulation at Time 2, controlling for the autoregressive (i.e., stability) effect of Time 1 emotion regulation, and so on (Selig & Little, 2012). Model fit was evaluated with chi-square, the comparative fit index (CFI), and the root mean square error of approximation (RMSEA). A nonsignificant chi-square ($p > .05$) and commonly used cutoff values of .95 for CFI and .06 for RMSEA indicated good model fit (Hu & Bentler, 1999; Kline, 2011). Nested models were evaluated with the chi-square difference test, in
which a significant chi-square difference indicated that the model with more freely estimated parameters fit the data better than the model in which the same parameters were fixed to zero, and a nonsignificant chi-square difference indicated that the models fit equally well (Kline, 2011).

The first path model included emotion regulation and harsh parenting at 14, 24 and 36 months. All main path model variables were regressed on all of the control variables (EHS participation, child sex, ethnicity, family risk, maternal depression, child negative emotionality). Within-time associations between emotion regulation and harsh parenting were specified as well. Autoregressive paths from 14 to 24–36 months estimated stability within each domain; cross-lagged paths from 14 to 24 months, 14 to 36 months, and 24 to 36 months estimated the effects of harsh parenting on emotion regulation (i.e., mother effects); and reciprocal cross-lagged paths estimated the effects of emotion regulation on harsh parenting (i.e., child effects). Model fit was assessed along the way to examine the contribution of autoregressive, mother effect, and child effect paths to the model.

The next model added to the original model by examining the moderating effect of teacher sensitivity (see Figure 1). First 14-month teacher sensitivity was included as a moderator of the mother effects paths of (a) 14-month harsh parenting to 24-month emotion regulation and (b) 14-month harsh parenting to 36-month emotion regulation. We tested moderation by including the variables 14-month teacher sensitivity and 14-month teacher sensitivity × 14-month harsh parenting as predictors of 24- and 36-month emotion regulation. Hours spent in child care at 14 months was also included as a covariate. Finally, restricting the sample to families who continued to participate in child care at 24 months, we added 24-month teacher sensitivity to the model as a moderator by including the variables 24-month teacher sensitivity and 24-month teacher sensitivity × 24-month harsh parenting as predictors of 36-month emotion regulation. Hours spent in child care at 24 months was also included as a covariate. In all analyses, interactions represented the multiplicative product of the standardized values (z scores) of teacher sensitivity and harsh parenting.

Rates of missing data were 4%, 7%, and 14% for emotion regulation and 6%, 8%, and 15% for harsh parenting at the 14-, 24, and 36-month time points, respectively. Rates of missing data for all other variables were <5% or zero. We handled missing data using full information maximum likelihood estimation, in which we included information from all participants by estimating parameters based on available data and implied values of missing data given the associations between variables in the available data (Schlomer, Bauman, & Card, 2010).

Results

Descriptive statistics and bivariate correlations

Descriptive statistics and correlations for all study variables are presented in Table 1. On average, emotion regulation increased at each time point, whereas harsh parenting decreased. Given the 7-point scales (1–7) used to measure harsh parenting behaviors (intrusiveness and negative regard), mean scores were relatively low (Ms = 2.02, 1.72, and 1.40 at the 14-, 24-, and 36-month time points, respectively). Within each domain, emotion regulation and harsh parenting scores were significantly positively correlated across each time point. With one exception, bivariate correlations indicated significant inverse associations between emotion regulation and harsh parenting within and across the time points. Children in the EHS program group were more likely to be in classrooms with teachers who scored higher on 14-month teacher sensitivity. At the bivariate level, teacher sensitivity at 14 and 24 months was unrelated to emotion regulation.

Emotion regulation and harsh parenting

The first path model estimated the autoregressive and cross-lagged paths between emotion regulation and harsh parenting. All path models included within-time associations between the variables and accounted for all covariates. To build the path model, we first estimated the autoregressive paths
Table 1. Bivariate correlations and descriptive statistics for study variables.

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<tr>
<td>2. Child is male = 1</td>
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<tr>
<td>3. African American = 1</td>
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<td>-0.43</td>
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<td>5. Other = 1</td>
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<td>-0.16</td>
<td>-0.10</td>
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<tr>
<td>6. Family risk at baseline</td>
<td>0.06</td>
<td>-0.02</td>
<td>0.09</td>
<td>-0.04</td>
<td>-0.01</td>
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<tr>
<td>7. Child negative emotionality</td>
<td>0.11</td>
<td>0.06</td>
<td>0.16</td>
<td>-0.08</td>
<td>-0.05</td>
<td>0.14</td>
<td>-0.01</td>
<td>0.08</td>
<td>-0.05</td>
<td>-0.01</td>
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<tr>
<td>8. Maternal depression</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.08</td>
<td>0.16</td>
<td>-0.02</td>
<td>0.08</td>
<td>-0.05</td>
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<tr>
<td>9. Emotion regulation (14 months)</td>
<td>-0.02</td>
<td>-0.16</td>
<td>-0.10</td>
<td>0.14</td>
<td>0.07</td>
<td>-0.02</td>
<td>-0.16</td>
<td>-0.09</td>
<td>-0.01</td>
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<tr>
<td>10. Emotion regulation (24 months)</td>
<td>-0.01</td>
<td>-0.17</td>
<td>-0.02</td>
<td>0.12</td>
<td>0.05</td>
<td>-0.09</td>
<td>-0.13</td>
<td>-0.07</td>
<td>0.25</td>
<td>-0.01</td>
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<tr>
<td>11. Emotion regulation (36 months)</td>
<td>-0.01</td>
<td>-0.23</td>
<td>0.04</td>
<td>0.01</td>
<td>0.04</td>
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<tr>
<td>12. Harsh parenting (14 months)</td>
<td>0.01</td>
<td>0.18</td>
<td>0.22</td>
<td>-0.07</td>
<td>-0.05</td>
<td>0.14</td>
<td>0.15</td>
<td>-0.10</td>
<td>-0.21</td>
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<td>13. Harsh parenting (24 months)</td>
<td>0.12</td>
<td>0.08</td>
<td>0.28</td>
<td>-0.13</td>
<td>0.05</td>
<td>0.22</td>
<td>0.11</td>
<td>0.08</td>
<td>-0.16</td>
<td>-0.17</td>
<td>-0.18</td>
<td>-0.29</td>
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<tr>
<td>14. Harsh parenting (36 months)</td>
<td>0.01</td>
<td>0.04</td>
<td>0.27</td>
<td>-0.11</td>
<td>-0.02</td>
<td>0.16</td>
<td>-0.02</td>
<td>0.03</td>
<td>0.23</td>
<td>-0.09</td>
<td>-0.15</td>
<td>0.20</td>
<td>0.41</td>
<td>-0.01</td>
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<tr>
<td>15. Teacher sensitivity (14 months)</td>
<td>0.30</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.06</td>
<td>-0.04</td>
<td>-0.01</td>
<td>-0.11</td>
<td>-0.03</td>
<td>0.08</td>
<td>0.07</td>
<td>0.03</td>
<td>-0.02</td>
<td>0.00</td>
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<td>0.00</td>
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<tr>
<td>16. Hours in child care (14 months)</td>
<td>0.08</td>
<td>-0.06</td>
<td>-0.03</td>
<td>-0.05</td>
<td>0.02</td>
<td>-0.13</td>
<td>-0.07</td>
<td>0.07</td>
<td>-0.05</td>
<td>-0.06</td>
<td>-0.07</td>
<td>-0.06</td>
<td>-0.03</td>
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<td>-0.05</td>
<td>-0.01</td>
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<tr>
<td>17. Teacher sensitivity (24 months)</td>
<td>0.13</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.04</td>
<td>0.04</td>
<td>0.13</td>
<td>0.03</td>
<td>0.05</td>
<td>-0.06</td>
<td>-0.03</td>
<td>-0.05</td>
<td>0.15</td>
<td>0.01</td>
<td>0.00</td>
<td>0.42</td>
<td>-0.01</td>
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<tr>
<td>18. Hours in child care (24 months)</td>
<td>0.07</td>
<td>-0.07</td>
<td>-0.13</td>
<td>0.04</td>
<td>0.02</td>
<td>-0.07</td>
<td>-0.07</td>
<td>-0.13</td>
<td>-0.01</td>
<td>-0.11</td>
<td>-0.13</td>
<td>0.06</td>
<td>-0.02</td>
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<td>-0.08</td>
<td>0.68</td>
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<tr>
<td>M</td>
<td>2.41</td>
<td>2.88</td>
<td>11.24</td>
<td>3.70</td>
<td>3.73</td>
<td>3.96</td>
<td>2.02</td>
<td>1.72</td>
<td>1.40</td>
<td>3.35</td>
<td>39.36</td>
<td>3.30</td>
<td>35.34</td>
<td>3.30</td>
<td>35.34</td>
<td>3.30</td>
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<tr>
<td>SD</td>
<td>1.14</td>
<td>0.98</td>
<td>8.86</td>
<td>0.65</td>
<td>0.78</td>
<td>0.79</td>
<td>0.89</td>
<td>0.87</td>
<td>0.55</td>
<td>0.43</td>
<td>28.10</td>
<td>0.49</td>
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<td>0.49</td>
<td>20.01</td>
<td>0.49</td>
<td>20.01</td>
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Note. EHS = Early Head Start.

*a* = control. *b* = child is female. *c* = reference group is Caucasian. *d* = Bivariate correlations and descriptive statistics include the subsample of families who participated in child care at 24 months. *p < .05. **p < .01. ***p < .001.
across each domain, $\chi^2(8, \ N=310) = 32.23, \ p < .001, \ CFI = .903, \ RMSEA = .099$. Including the cross-lagged paths from harsh parenting to emotion regulation (i.e., mother effects) significantly improved the model, as did adding the cross-lagged paths from emotion regulation to harsh parenting (i.e., child effects): mother effects, $\Delta \chi^2(3, \ N=310) = 19.21, \ p < .001, \ CFI = .968, \ RMSEA = .072$; child effects, $\Delta \chi^2(3, \ N=310) = 12.54, \ p < .01, \ CFI = 1.00, \ RMSEA = .00$. Standardized beta coefficients for the final model are presented in Figure 2, $\chi^2(2, \ N=310) = 0.49, \ p = .78, \ CFI = 1.00, \ RMSEA = .00$.

Autoregressive paths for emotion regulation indicated low stability from 14 to 24 months ($\beta = .17, \ p < .01$). That is, the relative ranking of a toddler’s 14-month emotion regulation score was predictive of the 24-month relative ranking, but the association was of low magnitude. Moderate stability was seen from 24 to 36 months ($\beta = .32, \ p < .01$). Autoregressive paths for harsh parenting indicated a similar pattern, with significant but low stability from 14 to 24 months ($\beta = .19, \ p < .01$) and moderate stability from 24 to 36 months ($\beta = .33, \ p < .001$). Emotion regulation and harsh parenting were inversely associated at 14 months ($r = -.21, \ p < .01$), but within-time associations at 24 and 36 months were not significant.

Significant cross-lagged paths emanated from the 14-month time point exclusively. More 14-month harsh parenting predicted lower 24-month emotion regulation independent of the stability effect of 14-month emotion regulation ($\beta = -.14, \ p < .01$). The only significant reciprocal paths were from 14 to 36 months. After we accounted for all autoregressive and cross-lagged paths, higher 14-month harsh parenting remained a significant predictor of lower 36-month emotion regulation ($\beta = -.20, \ p < .01$). Likewise, lower 14-month emotion regulation scores remained a significant predictor of more 36-month harsh parenting ($\beta = -.19, \ p < .01$).

**Teacher sensitivity as a moderator of harsh parenting**

Another set of models examined the potential protective role of 14-month teacher sensitivity on the effect of harsh parenting on emotion regulation (controlling for hours in child care). First paths specifying 14-month teacher sensitivity and the interaction term (14-month teacher sensitivity $\times$ 14-month harsh parenting) as predictors of 24- and 36-month emotion regulation were added to the model. The model fit the data well, $\chi^2(11, \ N=310) = 3.77, \ p = .98, \ CFI = 1.00, \ RMSEA = .00$. However, 14-month teacher sensitivity was not significantly associated with emotion regulation at 24 months ($\beta = .11, \ p = .08$) or 36 months ($\beta = .04, \ p = .53$). The interaction term was not predictive of emotion regulation at 24 months ($\beta = .02, \ p = .72$) or 36 months ($\beta = -.02, \ p = .70$).

Next, restricting the sample to families who also participated in child care at 24 months, we added paths specifying 24-month teacher sensitivity and the interaction term (24-month teacher sensitivity $\times$ 24-month harsh parenting) as predictors of 36-month emotion regulation to the previous model.
The model fit the data well, $\chi^2(23, N=223) = 33.74, p = .07$, CFI = .95, RMSEA = .04. However, 14-month teacher sensitivity remained unrelated to emotion regulation at 24 months ($\beta = .03, p = .66$) and 36 months ($\beta = .09, p = .26$), and the 14-month interaction term remained unrelated to emotion regulation at 24 months ($\beta = .04, p = .60$) and 36 months ($\beta = -.01, p = .94$). Also, 24-month teacher sensitivity ($\beta = -.03, p = .72$) and the 24-month interaction term ($\beta = .05, p = .46$) were not predictive of 36-month emotion regulation.

**Discussion**

The aim of the present study was to examine the transactional nature of emotion regulation and harsh parenting in a sample of socioeconomically disadvantaged toddlers who attended center-based child care, specifically considering the protective effect of teacher sensitivity in attenuating the effects of harsh parenting on subsequent emotion regulation. It was anticipated that emotion regulation and harsh parenting would be inversely associated within and across time and that high teacher sensitivity would moderate this impact. Support for study hypotheses was mixed. Results are discussed in detail below in terms of stability in mothers’ and toddlers’ behaviors, the significance of the 14-month time point as a predictor of future outcomes, as well as the unexpected finding that teacher sensitivity was unrelated to these processes.

**Transactions in emotion regulation and harsh parenting**

In this sample of socioeconomically disadvantaged families, the results from the initial path model demonstrated the importance of accounting for stability as well as cross-lagged effects to understand the associations between mothers’ and toddlers’ behaviors across time. Autoregressive path coefficients indicated that for both emotion regulation and harsh parenting, higher scores at 14 months were associated with higher scores at 24 months, which were associated with higher scores at 36 months. The low to medium standardized beta coefficients provided evidence for significant yet modest stability in each domain, indicating that despite individual variability in mothers’ and toddlers’ behaviors, an element of these behaviors was self-driven. That is, increases in harsh parenting fueled further increases in harsh parenting. Likewise, increases in emotion regulation fueled further increases in emotion regulation. In addition, in contrast to the bivariate correlations, within-time correlations between harsh parenting and emotion regulation did not explain any significant variation once the paths at earlier time points were accounted for, providing further support for the importance of stability within each domain. These results align with other studies of transactional interactions that have documented stability in mothers’ harsh parenting and toddlers’ negative emotions (Del Vecchio & Rhoades, 2010; Scaramella et al., 2008).

After we accounted for this stability, results of the cross-lagged effects suggested that 14-month harsh parenting explained significant variation in 36-month emotion regulation and vice versa, which indicates that mothers and toddlers had an effect on each other’s behaviors independent of the effect of their own behavior at previous time points. It is important to note that effect sizes were modest, so toddlers’ capabilities and mothers’ behaviors did not account for all of the variation in the reciprocal variable at 36 months, but each party played a significant role in the other’s future outcomes. Despite this, a true pattern of coercive cycles (e.g., Scaramella & Leve, 2004) did not emerge across these particular time points. A crucial consideration is that the data collection time points may not have been the correct set points between transactions to adequately capture significant effects (Gershoff et al., 2009). It is unclear why the 24-month time point was largely uninvolved in cross-lagged effects and whether the 14- to 36-month cross-lagged effect would continue at different set points throughout early childhood and beyond. Nevertheless, the results of this study are theoretically consistent with reciprocal models of parent–child interactions (e.g., Sameroff, 2009) and provide more evidence for the importance of considering parent and child effects (after accounting for stability) in understanding how harsh parenting is related to the
development of emotion regulation. This study also provides additional evidence that mothers’ harsh parenting exerts a stronger influence on toddlers’ emotions than vice versa. Harsh parenting at 14 months was a significant predictor of both 24- and 36-month emotion regulation (whereas 14-month emotion regulation was a significant predictor of just 36-month harsh parenting). These results support studies that have also documented the relative power of parent effects on toddler development (Del Vecchio & Rhoades, 2010; Martin et al., 2013; Paschall & Mastergeorge, 2015; Scaramella et al., 2008).

It is interesting that significant cross-lagged paths emanated from the 14-month time point exclusively. The significance of the 14-month behaviors for the reciprocal effect of harsh parenting and emotion regulation may be explained by typical developmental progression and timing. For example, evidence suggests that by 24 months, parents typically demonstrate increases in negative parenting behaviors when they are forced to respond to developmentally appropriate misbehaviors and emotional transgressions (H. K. Kim, Pears, Fisher, Connelly, & Landsverk, 2010). Two-year-olds’ increasingly advanced physical and cognitive skills fuel their desire for autonomy, yet limitations with language and attempts to execute behaviors that outpace their abilities lead to frustrations and outbursts. In contrast, 14-month-olds are relatively limited in their abilities. During this time, the transition from external to internal regulatory control is just emerging, as are physical and cognitive capabilities that facilitate strategies for regulation (Calkins & Hill, 2006; Fox & Calkins, 2003). Harsh parenting behaviors characterized as negative, punitive, and controlling may be an especially poor match for the developmental needs of this young age, resulting in stronger effects on future regulation skills than if these behaviors were to occur later. Younger toddlers require a high degree of scaffolding from caregivers, and children who experience harsh parenting during this transition may have lasting emotion regulation deficits that in turn contribute to greater exposure to harsh parenting over time. Likewise, although it is to be expected that younger toddlers have more limited emotion regulation skills, those with especially poor skills at a young age pose additional stress and caregiving challenges to parents, perhaps eliciting more harsh behaviors in the future (Cole, 2003). In terms of socioeconomically disadvantaged families (especially those participating in programs such as EHS), the results of this study lend further support to the importance of identifying maladaptive parenting behaviors as early as possible so parents have the support and knowledge to scaffold healthy emotion regulation when their children are still in infancy, setting the stage for healthy parent–child interactions in early childhood.

**The protective role of teacher sensitivity?**

Contrary to study hypotheses, teacher sensitivity was not associated with emotion regulation when considered at 14 months or when considered at 14 and 24 months. There were no significant direct associations between teacher sensitivity and emotion regulation, nor did teacher sensitivity serve as a protective factor for toddlers experiencing high levels of harsh parenting. These findings are unexpected given the large body of evidence that suggests the importance of teacher sensitivity (or child care quality more broadly) in socioemotional development, especially for children living in socioeconomic disadvantage (Burchinal & Cryer, 2003; Love et al., 2005; NICHD ECCRN, 1998, 2001; Peisner-Feinberg et al., 2001; Vandell et al., 2010; Vogel et al., 2010; Votruba-Drzal et al., 2010; Watamura et al., 2011).

Several explanations for these findings are possible. First, conceptualization of the role center-based child care plays in the development of emotion regulation rests on the hypothesis that emotion regulation skills are the underlying foundation for other socioemotional skills that already have established links with child care quality (Blair et al., 2012). However, it is possible that the associations between child care, parenting, and emotion regulation represented in the present study (i.e., direct and interactive associations) may not accurately depict the way in which teacher sensitivity facilitates regulatory skills, especially in the context of harsh parenting. For example, although this study examined the subsample of families who participated in child care at both 14 and 24 months,
more years of a sensitive child care teacher may be needed to attenuate the effect of harsh parenting experiences at home, especially for toddlers living with additional poverty-related stressors. Given the nature of autoregressive cross-lagged path analyses, a protective effect may emerge at time points not represented in the current analyses (Gershoff et al., 2009). Alternatively, teacher sensitivity may emerge as a protective effect when considered cumulatively across many years of child care. Longitudinal examinations of the NICHD SECCYD have aggregated nonmaternal child care caregiving quality from child age 6 to 54 months, representing a much longer exposure time to a sensitive child care context and more potential to operate as a protective factor (Watamura et al., 2011) and predictor of outcomes out to adolescence (Vandell et al., 2010).

Second, transactional models of development posit proximal interactions as the mechanisms that drive development (Sameroff, 2009). The Caregiver Interaction Scale (the measure used in this study to capture teacher sensitivity) actually represents quality at the classroom level. That is, teachers and the environment are assessed across the entire classroom, not at the level of each child. This measure may not be reflective of the theorized transactional processes that are involved in the development of emotion regulation, especially given how critical interpersonal interactions are for this domain (Mortensen & Barnett, 2015). Researchers have suggested that classroom-level measures of teacher sensitivity (and other dimensions of child care quality) may misrepresent individual children’s experiences (Hallam, Fouts, Bargreen, & Caudle, 2009; Katz, 1994; Melhuish, 2001). For example, one study found evidence that not all children in high-quality classrooms have high-quality experiences (Jeon et al., 2010). In that study, individual preschool children were observed for their direct interaction with child care quality indicators on the Early Childhood Environment Rating Scale, and only a fraction of the children had a quality experience. Observing teacher–child interactions that are reflective of toddlers’ lived experiences may reveal a different story, which may be especially relevant for children living in poverty and attending programs such as EHS. Toddlers are already at risk for emotion regulation difficulties due to the stress of living in socioeconomic disadvantage (Bradley & Corwyn, 2002; Conger & Donnellan, 2007), and individual observations of sensitive teacher behaviors in response to emotion regulation difficulties may capture how teachers meet the needs of individual children who are facing harsh parenting compounded with varying sociodemographic risk factors at home. Elucidating the nature of these processes would help promote the quality of publicly funded programs such as EHS and could have important implications for training child care teachers to adapt their sensitive responses to best meet the needs of toddlers facing varying stressors.

Limitations and future directions

There are some important limitations of this study to consider that also provide opportunities for future directions for research in this area. It is important to consider that the cross-lagged effects from 14 to 36 months represent one transaction; thus, more time points are needed to see whether cross-lagged associations are replicated across time, representing true coercive cycles of parent–child interactions (e.g., Scaramella & Leve, 2004). In addition, it is important to consider that the lack of cross-lagged paths from 24 months could be a function of the time points selected for the path model; these discrete time points may not represent the times at which transactions between emotion regulation and harsh parenting behaviors (or protective effects of teacher sensitivity) can be captured (Gershoff et al., 2009). It will be important to extend this work with time points through early childhood. In addition, as discussed above, examining teacher sensitivity as a protective factor at individual time points is only one possible way to conceptualize these processes. Cumulative effects or cross-lagged associations between toddlers and teachers throughout early childhood may capture significant associations between teacher sensitivity and emotion regulation. Finally, the present study only considered mothers’ parenting behaviors within the home. Other caregivers in the home (e.g., fathers, grandparents, mothers’ romantic partners) stand to play an important role in toddlers’ emotion regulation as well as mothers’ own
harsh parenting behaviors. Future studies should consider an ecological profile of the caregiving environment in the home, which may have important implications for the relative importance of teacher sensitivity in child care.

Conclusions

The transactional processes between mothers and toddlers provide an important context for the development of emotion regulation. Harsh parenting threatens to undermine these processes; thus, it is important to consider sources of support from other caregiving settings, such as center-based child care. Harsh parenting and poor emotion regulation during early toddlerhood may be particularly significant in setting the stage for reciprocal interactions that fuel increases in harsh parenting and maladaptive emotion regulation development, but more research is needed to understand the potential role of teacher sensitivity in child care in serving toddlers and families, especially those who may be at a heightened risk for establishing coercive cycles of parent–child interactions.

Funding Statement

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References


