

Impact of Maternal ACEs and Postpartum Depression on Infant Socioemotional Functioning



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Introduction

Experiencing adversity in childhood can have life-long implications. In a landmark study on adverse child experiences (ACEs), Felitti et al. (1998) partnered with Kaiser Permanente and the Centers for Disease Control and Prevention (CDC) to explore the relationship between ACEs and physical and mental illness later in life. Over half of the participants reported a history of one or more ACEs (63.9%), with 9.5% of participants endorsing three or more ACEs (CDC, 2016).

ACEs not only impact the individual, but also have an intergenerational effective. A large body of research has shown that ACEs can contribute to a cycle of trauma in families (e.g. McDonnell & Valentino, 2016; Lê-Scherban, Wang, Boyle-Steed, & Pachter, 2018; Stapleton, Bosk, Duron, Greenfield, Ocasio, MacKenzie, 2018; O'Neal, Richardson, Mancini, & Grimsley, 2016).

Some research suggests higher caregiver ACEs may be associated with poorer infant and child socioemotional functioning (Szilagyi, et al., 2016; Mantymaa, et al. 2012; Steele et al., 2016; McDonnell & Valentino, 2016), and caregiver mental health difficulties, such as depression, may underlie this relationship (Hunt, Berger, & Slack, 2017; Letourneau et al., 2019; Kerker et al., 2016). However, more research is needed.

Purpose

The current study sought to explore the relationship between maternal ACEs and socioemotional functioning of infants among a rural, underserved population. A second goal of the study was to determine whether maternal postpartum depression mediated this relationship.

We hypothesized that a higher number of maternal ACEs would predict poorer infant socioemotional functioning at 2 months of age, and that this relationship would be partially or fully mediated by maternal postpartum depressive symptoms.

Study Design

The current study utilized archival data from a pediatric clinic in the Pacific Northwest to examine the relationship between maternal ACEs and infant socioemotional functioning, and determine whether this relationship was mediated by maternal postpartum depressive symptoms.

Measures

Caregiver ACE screener. The Caregiver ACE screener is a 10-item questionnaire developed by the pediatric practice that yields a total ACE "score." Caregivers indicate whether or not they experienced various adversities during their childhood (e.g., child abuse, parental divorce, parent substance misuse, parent mental illness, etc.). The number of "Yes" responses are summed for total ACE score.

Survey of Well-being of Young Children (SWYC). The SWYC is a comprehensive screening tool for pediatric primary care that includes various measures of child and family health (Perrin, Sheldrick, Visco, & Mattern, 2016). Of interest in the current study was the Baby Pediatric Symptom Checklist (BPSC), a measure of infant socioemotional functioning. The BPSC contains 12 items, divided into three subscales (i.e., irritability, inflexibility, and difficulty with routines), each with 4 items (Sheldrick, et al., 2013). Mothers complete the BPSC at their infant's 2-month well-child visit. We used the total BPSC score in this study.

Edinburgh Postnatal Depression Scale (EPDS). The EPDS is a 10-question, Likert-scale measure of perinatal depressive symptoms that was administered at the 2-week well-child visit (Cox, Holden, & Sagovsky, 1987).

Statistical Analyses

Mediation was conducted using a conditional process analysis (Hayes, 2017) in SPSS to examine whether the relationship between caregiver ACEs and infant socioemotional functioning was mediated by maternal postpartum depression. Covariates were included when testing the mediation model.

Results

None of the demographic variables (gender, race, ethnicity, or age) were significantly related to socioemotional functioning of infants.

Table 1
Infant Gender, Race/Ethnicity, & Medicaid Status (N = 31)

	Frequency	Percent
Gender		
Female	17	54.8
Male	14	45.2
Race		
White	29	93.5
American Indian/Alaska Native	1	3.2
Black	1	3.2
Ethnicity		
Not Hispanic/ Latino	25	80.6
Hispanic/ Latino	6	19.4
Medicaid		
Yes	22	71.0
No*	9	29.0

* Private health insurance

The total effect model (see Figure 1) of caregiver ACEs did not significantly predict socioemotional functioning of infants after controlling for demographic covariates ($b = 0.17$, $p = .37$, 95% CI [-0.21, 0.55]).

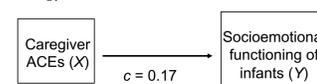


Figure 1. The total effect (c) of caregiver ACEs on infant socioemotional functioning

The direct effect model (see Figure 2) of caregiver ACEs also did not significantly predict socioemotional functioning of infants ($b = 0.13$, $p = .47$, 95% CI [-0.23, 0.48]), nor did the indirect effect model, which included postpartum depression symptoms ($a*b = 0.05$, SE = 0.09, 95% CI [-0.15, 0.24]). However, postpartum depression did significantly predict socioemotional functioning of infants ($b = 0.33$, $p < .01$). Specifically, higher maternal postpartum symptoms were associated with increased infant socioemotional difficulties.

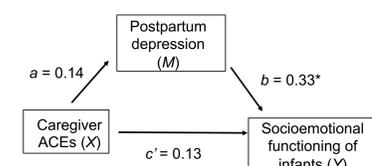


Figure 2. The mediating effect of postpartum depression symptoms in the relationship between caregiver ACEs and socioemotional functioning of infants. Note: * $p < .01$.

Discussion

We did not find support for a relationship between maternal ACEs and infant socioemotional functioning at 2 months of age, which was inconsistent with our hypotheses and past research.

Our small sample size and the restricted range of maternal ACEs (i.e., most mothers reported no or few ACEs) may have limited our ability to detect statistical significance. Or, it may be the case that among our sample of rural, underserved families, maternal ACEs do not negatively impact socioemotional functioning in early infancy. Another possibility is that the impact of maternal ACEs impacts on socioemotional functioning may not be apparent in early infancy, but rather develops later in development.

Findings from the present study do support an increased risk of socioemotional difficulties among infants of mothers who experience postpartum depression symptoms. These results suggest that:

- Mothers presenting to infant well-child visits should be screened for postpartum depression symptoms.
- Following a positive screen, medical providers should refer patients to behavioral health for targeted prevention, and, when indicated, mothers should be referred for clinical treatment.

Continued research examining the relationship between ACEs, postpartum depression, and infant socioemotional functioning is important to better understanding which families are most at risk for negative outcomes and to inform screening and intervention.

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For More Information

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