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Associations Between Emotion Dysregulation Dimensions and Parenting Behaviors in Trauma-Exposed African American Mothers

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Abstract

Parenting behavior is key to understanding transmission of intergenerational trauma-related risk. Emotion dysregulation (ED) and psychological symptoms are associated with negative parenting behaviors, although their unique roles remain unclear. The current study examined associations of ED dimensions, depression, PTSD, and substance use with parenting behaviors in African American mothers. Participants included 98 mother-child dyads recruited from an urban hospital setting. Trauma exposure, ED, depression, substance use, and parenting behaviors (overreactivity, laxness, demandingness, warmth, corporal punishment) were assessed using self-report measures. PTSD was assessed using a semi-structured interview. Correlational results showed significant positive associations between ED and dysfunctional parenting behavior ($p < .001$), overreactivity ($p < .001$), and laxness ($p < .01$) and negative associations with warmth ($p < .01$). These associations varied across the dimensions of ED examined. Regression analyses were run to examine the unique effects of ED (separate models for overall and specific dimensions) and psychological symptoms; overall ED and its dimensions accounted for significant variance in parental behaviors ($R^2 = .10–.24$, $p's < .01$), while additional model steps including psychological symptoms were not significant except for the association between depression and lower warmth. In efforts to reduce the intergenerational effects of trauma, parenting interventions that include a direct focus on certain dimensions of ED may be critical.

Keywords

posttraumatic stress disorder, depression, substance abuse, parenting, trauma

Chronic trauma exposure increases risk for negative functional and health outcomes. Rates of chronic trauma exposure, trauma-related disorders (e.g., depression, posttraumatic stress disorder (PTSD)), and substance use disorders are high in low-income urban African American communities (Khoury et al., 2010; Powers et al., 2017). Maternal trauma exposure and subsequent psychological disorders also contribute to the intergenerational transmission of trauma-related risk in children, in part through parenting behaviors (Cohen et al., 2008; Cross et al., 2017). Thus, to better understand and mitigate factors involved in intergenerational trauma-related risk, it is critical to examine the unique associations of emotion dysregulation (ED) and trauma-related psychological symptoms with parenting behaviors among low-income African American mothers with substantial exposure to trauma.

ED reflects deficits in emotional awareness and acceptance and the flexible management of negative emotional states (Gross & Thompson, 2007) and is a transdiagnostic risk factor for psychological disorders that occur following trauma exposure (Kim & Cicchetti, 2010; McLaughlin et al., 2011). Additionally, in urban African American samples, after exposure to trauma, ED has been found to be a risk factor for depression (Crow et al., 2014), PTSD (Pencea et al., 2020), and substance misuse (Mandavia et al., 2016). ED also is relevant in the context of parenting (Crandall et al., 2015; Rutherford et al., 2015). Emotional development begins in infancy, and exposure to trauma, abuse, and neglect across development can detrimentally affect emotion regulation capacity (Cooke et al., 2016). Parents' emotion regulation abilities influence their parenting behaviors, which in turn impacts

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their children's emotion regulation and mental health (Bridgett et al., 2015; Katz et al., 2012).

Because emotion regulation is key to effective parenting, determining associations between ED and specific parenting behaviors in the context of trauma and stress is essential, and research on such associations in African American communities remains limited. Maternal ED has been associated with overreactivity and laxness (Shaffer et al., 2018), unsupportive emotion parenting practices (Morelen et al., 2016), and lower warmth (Sarıtaş et al., 2013). Importantly, differences in parenting behaviors exist across race/ethnicity and socioeconomic status. Parenting behaviors are affected by psychosocial stressors, many of which disproportionately impact African Americans. Although more complex than can be reviewed in this article, African American families are overrepresented in the child welfare system (Hines et al., 2004), and have disproportionally longer stays in care and lower positive permanency (Huggins-Hoyt et al., 2019). Therefore, examining factors that influence parenting behaviors in underrepresented groups, particularly those at risk for trauma exposure and negative outcomes, is critical (Ispa et al., 2004; Vreeland et al., 2019). Additionally, while parenting behaviors have been shown to be stable over time, parenting is dynamic across development (Bradley et al., 2017) and middle childhood is a salient time for the parent-child relationship before adolescence when independence grows and social support turns toward friend groups (Kerns et al., 2001).

ED is a multidimensional construct and encompasses deficits across many dimensions including awareness of emotions, understanding of emotions, acceptance of emotions, ability to engage in goal-directed behavior when experiencing negative emotions, ability to refrain from impulsive behavior when experiencing negative emotions, and ability to access and flexibly use effective emotion regulation strategies to modulate negative emotions as they arise (Gratz & Roemer, 2004). There is no research on the associations between specific ED dimensions and parenting behaviors in chronically trauma-exposed mothers. Understanding the impact of specific dimensions of ED on negative parenting behaviors could help to identify necessary targets for interventions, which is imperative to reduce intergenerational transmission of risk associated with trauma. It is also essential to establish the differential roles that ED and co-occurring psychological disorders play in parenting behaviors since ED is an important mechanism of risk for negative psychological outcomes in the context of trauma. For the present study, we focus on depression, PTSD, and substance use because they are common sequelae of trauma exposure and have established links with ED and with negative parenting behaviors (Fraser et al., 2010; Hatzis et al., 2017). We also focus on low-income African American families because they are underrepresented in research and yet are at particularly high risk for trauma exposure and subsequent negative psychological effects.

The aim of the current study was to examine the associations between ED dimensions and parenting behaviors (i.e., overall dysfunctional parenting behavior, overreactivity, laxness, warmth, demandingness, and corporal punishment) in trauma-exposed African American mothers and determine the separate and unique effects of psychological symptoms (i.e., depression, PTSD, and substance use) on parenting behaviors independent of ED. We hypothesized that both ED and psychological symptoms would be positively associated with all measured negative parenting behaviors and negatively associated with maternal warmth. We hypothesized that psychological symptoms would not predict negative parenting behaviors beyond the effect of ED. Trauma exposure was included as a variable of interest to establish the direct associations with parenting behaviors and ensure associations between our primary variables of interest are not a result of trauma exposure alone. To clarify the aspects of ED that may be driving the relations with parenting behaviors, associations between specific dimensions of ED and parenting behaviors were explored. Gaining insight into the differential influences of ED and psychological symptoms on parenting behaviors in the context of trauma among African American mothers and their children is critical for elucidating clear treatment targets in at risk populations and reducing intergenerational trauma-related risk.

Method

Procedure

Participants were drawn from an NIH-funded study of intergenerational transmission of trauma risk in mothers and their school-aged children in a low socioeconomic, primarily African American urban sample. Data were collected between September 2013 and December 2017. Participants were first enrolled in a larger project focused on trauma-related risk and resilience factors for PTSD and other trauma-related disorders among non-psychiatric treatment seeking individuals within an urban hospital setting (Gillespie et al., 2009). They were recruited from medical and pharmacy waiting rooms of a public health system and the emergency department waiting room of a pediatric, non-profit hospital, in an urban city in the Southeastern U.S.

After signing informed consent, screening questionnaires regarding trauma history and psychiatric symptoms in mothers were administered. In addition to the eligibility requirements for the parent study (i.e., aged 18–65, able to give informed consent), to be eligible for the current study, mothers had to self-identify as African American and have custody of an 8–12 year old child. Participants were not required to have experienced trauma. Participants, mother or child, with self-identified intellectual disability, active psychotic disorder, and/or autism spectrum disorder were excluded. Active psychotic disorder may have been identified by the clinical interviewer during the initial screening, and if so, the participant was discontinued. Informed consent was obtained from mothers and assent was obtained from children. Confidentiality and the limits to confidentiality were discussed including reporting of active child abuse or neglect. All study procedures were approved by the institutional review boards

Table 1. Descriptive Details of Variables of Interest.

Variables	Mean	SD	Range
PS Total	2.54	0.67	1.17–4.23
PS Overreactivity	1.93	0.96	0.40–4.70
PS Laxness	2.27	1.01	0.64–5.00
PQ Warmth	4.16	0.43	3.00–5.00
PQ Demandingness	3.21	0.38	2.22–4.48
PQ Corporal Punishment	1.87	0.61	1.00–3.40
Maternal trauma exposure (TEI)	5.15	3.35	0–16
Maternal emotion dysregulation (DERS)	25.30	8.64	15–53
DERS Nonacceptance	4.71	2.22	3–12
DERS Goal-directed behavior	6.75	3.19	3–15
DERS Impulse	4.38	1.77	3–10
DERS Strategies	4.38	1.66	3–9
DERS Clarity	5.26	2.51	3–12
Maternal figure PTSD symptoms (CAPS)$^{\Delta}$	16.99	13.63	0–50
Maternal figure depression symptoms (BDI-II)	15.26	12.31	0–58
Maternal figure alcohol use (AUDIT)	3.20	5.26	0–28
Maternal figure drug use (DAST)	0.42	1.14	0–6

Note: PS = Parenting Scale, PQ = Parenting Questionnaire, TEI = Traumatic Events Inventory, CAPS = Clinical Administered PTSD Scale, BDI-II = Beck Depression Inventory, II, DERS = Difficulty in Emotion Regulation Scale, 18-item version excluding awareness. $^{\Delta}$n = 93

of **Emory University and the Grady Research Oversight Committee**. Informed consent was obtained in accordance with the regulations of the Declaration of Helsinki for all the participants after the procedure was explained in its entirety. Participants were compensated for their time with $15 for the initial screening and $60 for the diagnostic assessment.

Participants

The sample consisted of 98 African American mothers (or grandmothers with legal and at least 50% physical custody)[1] who had complete data for their own trauma, psychiatric symptoms, and negative parenting behavior. Ninety percent of the sample were biological mothers. The average age of the maternal figures was 36.20 (SD = 8.52, range = 25–58). Consistent with the population served at the health system, the sample was predominately low income, with 62.2% unemployed, 79.4% coming from households with a monthly income of less than $2,000, and low levels of maternal figure education (e.g., 21.4% had less than high school education, 33.7% had a high school degree or GED; see Supplemental Table 1).

Measures

Traumatic Events Inventory (TEI) (Gillespie et al., 2009) is a 16-item measure of lifetime trauma exposure. Trauma load reflects a sum score of the total number of trauma types experienced in the maternal figure's lifetime. Construct validity of this measure has been shown in low-income African American samples (e.g., Gillespie et al., 2009; Powers et al., 2017).

Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004) is a 36-item measure of emotion dysregulation. A validated 15-item version of the original 36 item measure ($\alpha = 0.93$) that includes five subscales: 1) non-acceptance of negative emotions, 2) difficulty engaging in goal-directed behavior in the presence of negative emotions, 3) difficulty controlling impulses in the presence of negative emotions, 4) limited use of situationally-appropriate/effective emotion regulation strategies, and 5) lack of clarity of one's emotions was used based on a recently published validation paper in our lab with low-income African Americans (Mekawi et al., 2020).

Clinician-Administered PTSD Scale (CAPS) (Weathers et al., 2013) is a psychometrically-validated semi-structured diagnostic instrument measuring current PTSD diagnosis and symptom severity. Validity of the CAPS in this study population has been shown across numerous prior studies (e.g., Gillespie et al., 2009; Powers et al., 2017). Both CAPS for DSM-IV (CAPS-IV) and DSM-5 (CAPS-5) were used due to switching when CAPS-5 was released.[2] Interrater reliability (IRR) has previously been examined in our lab for both CAPS. IRR is good for PTSD diagnosis with CAPS-IV (n = 20, $\kappa = 0.64$) and CAPS-5 (n = 12, $\kappa = 0.83$, {Powers, 2017 #732}). Reliability of presence/absence of all PTSD symptoms on CAPS-5 was examined with 25 randomly chosen videos and results showed good IRR across all items ($\kappa = 0.77$).

Beck Depression Inventory-II (BDI-II) (Beck et al., 1996) is a reliable and well validated 21-item self-report measure of depression ($\alpha = 0.93$) that has been used extensively in research with this study population (e.g., Gillespie et al., 2009; Powers et al., 2017). Items were totaled to create an overall measure of depression symptom severity in the maternal figures. Depression severity scores were coded as follows: none or minimal depression = 0–13, mild depression = 14–19, moderate depression = 20–28, and severe depression = 29–63 based on previously identified cutoffs (Beck et al., 1996). In the present study, presence/absence of probable depression included moderate-or-severe levels of depressive symptoms.

Alcohol Use Disorder Identification Test (AUDIT) (Saunders et al., 1993) is an 18-item scale that queries lifetime and past-year alcohol use and is well-validated in African American samples (de Meneses-Gaya et al., 2009).

Drug Abuse Screening Test (DAST) (Skinner, 1983) is a 20-item measure examining illicit drug use using a yes/no response that has been validated in many populations (Villalobos-Gallegos et al., 2015) including this study population (Cross et al., 2015) ($\alpha = 0.85$ for AUDIT 12-month and $\alpha = 0.56$ for DAST 12-month). For the present study, past 12-month items were summed from each measure and then z-scored and combined together to create a composite substance use score (12-month: mean = 0.00, SD = 1.45, range = −0.98–4.37).

Parenting Scale (PS) (Arnold et al., 1993) is a well-validated 30-item self-report questionnaire about dysfunctional parenting behaviors with three subscales: laxness, overreactivity, and hostility. The PS has been previously used in a low-income African American sample (Reitman et al., 2001). Due to mixed findings regarding psychometric support for three versus two (i.e., laxness, overreactivity) subscales (Prinzie et al., 2007;

Table 2. Correlations Between Variables of Interest.

	1	2	3	4	5	6	7	8	9	10	11
PS Total											
PS Overreact	.63***										
PS Laxness	.84***	.24									
PQ Warmth	−.49***	−.66***	−.26**								
PQ Demand	−.53***	−.23	−.48***	.23							
PQ Corp Punish	.21	.62***	−.04	−.52***	−.03						
Trauma Load (TEI)	.18	.20	.09	−.11	−.17	−.03					
DERS Total	.44***	.37***	.35**	−.33**	−.24	.07	.43***				
BDI Total	.35***	.28**	.33**	−.30**	−.20	.03	.54***	.73***			
CAPS Total$^{\Delta}$	.29**	.15	.30**	−.23	−.16	−.07	.56***	.62***	.62***		
Substance Use$^{\times}$	.26**	.31**	.16	−.23	−.07	.18	.24	.20	.25**	.32**	

Note: **$p \leq .01$, ***$p < .001$; $^{\Delta}n = 93$; PS = Parenting Scale, PQ = Parenting Questionnaire, TEI = Traumatic Events Inventory, DERS = Difficulties in Emotion Regulation, BDI = Beck Depression Inventory, II, CAPS = Clinician Administered PTSD Scale. $^{\times}$Composite score based on Alcohol Use Disorders Identification Test and Drug Abuse Screening Test total scores.

Reitman et al., 2001; Rhoades & O'Leary, 2007; Steele et al., 2005), continuous scores for overall dysfunctional parenting behavior and scores on laxness and overreactivity subscales were used ($\alpha = 0.74$ for overall score, $\alpha = 0.77$ for laxness, and $\alpha = 0.68$ for overreactivity).

Parenting Questionnaire (PQ) (McCabe & Clark, 1999), a 50-item parent self-report of positive and negative parenting practices, including warmth, demandingness, and corporal punishment (warmth, $\alpha = 0.87$; demandingness, $\alpha = 0.71$; and corporal punishment, $\alpha = 0.74$). The PQ was developed in a sample of African American parents and their 11–14 year-old children. Table 1 lists descriptive statistics of all variables of interest.

Data Analysis

Analyses were performed using SPSS 26 Software to test the unique associations of ED and its dimensions and psychological symptoms (i.e., PTSD symptoms, depression symptoms, and substance use) on parenting behaviors (i.e., overall dysfunctional parenting behavior, overreactivity, laxness, warmth, demandingness, and corporal punishment). Maternal trauma exposure was included in analyses since this was a highly trauma exposed sample. We first examined the distributions of all variables. The level of skewness (range from −0.44 to 1.73) and kurtosis (−0.58–1.85) fell within the acceptable range (Tabachnick & Fidell, 2013) for all variables except DERS total and its dimensions: nonacceptance, impulses, and strategies; outliers for any values that fell three standard deviations outside the mean for these variables were excluded and thus impacted three participant scores for DERS total, four for nonacceptance, three for impulses, and three for strategies; skewness and kurtosis values were improved and fell in the acceptable range as a result. The composite substance use score also fell just outside the range of 2 (kurtosis = 2.03). Descriptive statistics (see Table 1) and bivariate correlations among variables of interest were computed. As shown in Supplemental Table 2, associations between demographic variables (i.e., age, maternal figure education level, and maternal figure household monthly income) and parenting behaviors were examined and there were no significant associations found at $p \leq .01$; therefore, demographic variables were not included in subsequent regression analyses. Next, correlations between ED dimensions and parenting behaviors were computed. Finally, based on the results of the correlational analyses, hierarchical linear regression analyses were conducted separately for DERS total and its dimensions to determine 1) the unique effects of ED and its dimensions on parenting behavior and 2) if psychological symptoms were independently predictive of parenting behavior above and beyond the effects of ED and its dimensions. To reduce unnecessary testing, all variables in regression models were based on $p \leq .01$ cutoff from correlation analyses. Variance inflation factor (VIF) values of all coefficients in regression analyses (range 1.46–2.39) fell well below the cutoff of 5 for concerns of multicollinearity (Hair et al., 2010).

Results

Ninety-eight percent of the sample reported exposure to at least one traumatic event. The average number of types of traumas experienced was greater than five (mean trauma load = 5.14, SD = 3.36, range = 0–16). The rate of PTSD diagnosis in this sample was 34.4% (n = 32)[3] and the rate of moderate-or-severe depression symptoms was 31.6% (n = 31). Fifty eight percent indicated past 12-month alcohol use and 16.3% indicated past 12-month drug use; the rate of likely hazardous drinking behavior was 10.1% (n = 10) and likely hazardous drug use was 1.0% (n = 1).

Correlational analyses of the associations among the variables are included in Table 2. The majority of dysfunctional parenting behaviors were positively correlated with one another, with the exception of PQ demandingness, which showed a negative correlation with PS total ($r = -.53$) and PS laxness ($r = -.48$). Our dimension of positive parenting behavior, PQ warmth, was negatively associated with all dysfunctional parenting behavior except demandingness. Trauma load, ED, depression symptoms, PTSD symptoms, and substance use were positively correlated with one another.

Table 3. Hierarchical Linear Regression Models Predicting Dysfunctional Parenting Behaviors by Overall ED and Psychological Symptoms.

	β	*t*	*R*	R^2 Δ	*F*Δ	*p-value*
PS Total^{+}						
Step 1			.45	.20	21.72	<.001***
DERS total	.45	4.66				
Step 2			.49	.04	1.33	.27
DERS total	.36	2.46*				
BDI Total	.12	0.86				
CAPS Total	−.05	−0.42				
Substance Use	.18	1.80				
PS Overreactivity^						
Step 1			.37	.14	14.40	<.001***
DERS Total	.37	3.80***				
Step 3			.42	.04	2.17	.12
DERS Total	.31	2.21*				
BDI Total	.02	0.16				
Substance Use	.20	2.07*				
PS Laxness$^{\times}$						
Step 1			.36	.13	12.91	.001**
DERS Total	.36	3.59**				
Step 2			.40	.03	1.25	.29
DERS Total	.18	1.20				
BDI Total	.19	1.30				
CAPS Total	.07	0.52				
PQ Warmth^						
Step 1			.33	.11	10.79	.001**
DERS Total	−.33	−3.29**				
Step 2			.38	.04	4.02	.048*
DERS Total	−.11	−0.79				
BDI Total	−.29	−2.01				

$^{+}$n = 88, ^n = 93, $^{\times}$n = 87; Note: *p < .05, **p < .01, ***p < .001; PS = Parenting Scale, PQ = Parenting Questionnaire, DERS = Difficulties in Emotion Regulation, BDI = Beck Depression Inventory, II, CAPS = Clinician Administered PTSD Scale.

Regarding associations between our independent variables of interest and parenting behaviors, both ED (DERS total) and depression symptom severity were positively associated with PS total, PS overreactivity, and PS laxness and significantly negatively associated with PQ warmth. PTSD symptom severity (CAPS total) was significantly positively associated with PS total and PS laxness. Substance use was positively associated with PS total and PS overreactivity. Correlations between the five dimensions of ED and parenting behaviors also were examined (see Supplemental Table 3). DERS nonacceptance of emotions dimension was not associated with any parenting behaviors. The other five dimensions were all positively associated with PS total and PS overreactivity. DERS difficulty with goal-directed behavior and impulses were positively associated with PS laxness. DERS difficulty with impulses was negatively associated with PQ warmth. No DERS dimensions were associated with PQ demandingness or corporal punishment.

Based on correlational results, two separate sets of hierarchical linear regression analyses were conducted with outcomes of interest: PS total, PS overreactivity, PS laxness, and PQ warmth. The first model predicting PS total included ED in step 1 and depression symptoms, PTSD symptoms, and substance use (12-month) in step 2. As shown in Table 3, when DERS total was included in the model, it accounted for 20% of the variance in dysfunctional parenting behavior ($p < 0.001$). When psychological symptoms were included in step 2, the model was not significant but DERS total remained significant. The second model predicting PS total included ED dimensions (step 1) and psychological symptoms (step 2). ED dimensions accounted for 24% of the variance in dysfunctional parenting behavior ($p < 0.001$); DERS difficulty with goal-directed behavior ($\beta = 0.26$) and lack of emotional clarity ($\beta = 0.27$) dimensions were positively associated with PS total. When psychological symptoms were included in step 2, the model was not significant and DERS dimensions were no longer associated with PS total (see supplemental Table 4).

The first model predicting parental overreactivity included ED in step 1, and depression symptoms and substance use (12-month) in step 2 (see Table 3). When DERS total was entered in the model, it accounted for 14% of additional variance in PS overreactivity ($p < 0.001$). When psychological symptoms were included in the model in step 2, the model was not significant; however, DERS total remained positively associated with PS overreactivity. The second model predicting parental overreactivity included ED dimensions (step 1), and depression symptoms and substance use (step 2; see supplemental Table 5). ED dimensions accounted for 18% of variance

in PS overreactivity ($p < 0.01$); DERS impulsivity dimension was significantly positively associated with PS overreactivity ($\beta = 0.31$). When psychological symptoms were included in the model in step 2, the model was not significant and DERS impulsivity was no longer significant (see Supplemental Table 5).

The first model predicting parental laxness included ED in step 1, and depression symptoms and PTSD symptoms in step 2. As shown in Table 3, when ED total was included in the model, it accounted for 13% of variance in PS laxness ($p = 0.001$). When psychological symptoms were included in the model in step 2, the model was not significant and ED total was no longer significant. The second model predicting parental laxness included ED dimensions (step 1), and depression symptoms and PTSD symptoms (step 2). ED dimensions accounted for 11% of variance in PS laxness ($p < 0.01$); DERS difficulty with goal-directed behavior was significantly positively associated with PS laxness ($\beta = 0.30$). When psychological symptoms were included in the model in step 2, the model was not significant and DERS dimensions were no longer significant (see Supplemental Table 6).

The first model predicting parental warmth included ED in step 1, and depression symptoms in step 2 (see Table 3). In this model, when DERS total was included in the model to predict warmth, it accounted for 11% of variance in PQ warmth ($p = 0.001$). When depression symptoms were included in the model in step 2, the model was significant ($p = .048$). and DERS total was no longer significant. The second model predicting parental warmth included ED impulsivity dimension (step 1), and depression symptoms (step 2). ED impulsivity accounted for 12% of variance in PQ warmth ($p = 0.001$). When depression symptoms were included in Step 2, it was significant ($p = .038$) and DERS impulsivity was no longer significant (see Supplemental Table 7).

Discussion

Understanding the unique effects of ED and psychological symptoms on parenting behaviors among trauma-exposed mothers is vital for informing intervention strategies and preventing negative outcomes in at risk families. Clarifying these processes among African American women is relevant given that they have not been a major focus of empirical study despite their high risk for trauma exposure and associated mental health stressors and symptoms (Bryant-Davis et al., 2010; Powers et al., 2015). In support of our hypothesis, we found significant associations between ED and its dimensions (except non-acceptance of emotions) and problematic parenting behaviors, including higher levels of overreactivity and laxness and lower levels of warmth. Additionally, in support of our hypothesis, many of the predicted associations emerged between psychological symptoms (depression, PTSD, and substance use) and problematic parenting behaviors. However, also in support of our hypothesis, psychological symptoms did not account for significant variance over ED in any of the models except depression with lower maternal warmth. In fact, overall ED remained significant even with psychological symptoms in the model for both overall dysfunctional parenting behavior and overreactivity. Since ED is an underlying factor across all these disorders, our results suggest ED may be salient in understanding problematic parenting behaviors and is thus a valuable transdiagnostic treatment target to address negative parenting outcomes in trauma-exposed African American mothers with a range of psychological symptoms.

Regression results revealed that different dimensions of ED were predictors of certain parenting behaviors. Difficulty with goal-directed behavior in the presence of strong emotions and lack of emotional clarity were the dimensions associated with overall dysfunctional parenting behavior, while difficulty controlling impulses in the presence of negative emotions was associated with overreactivity and lower warmth. Difficulty with goal-directed behavior was also associated with laxness. In contrast to the models with overall ED that remained significant even with the addition of psychological symptoms, the associations with specific ED dimensions were no longer significant when psychological symptoms were included in the models. It is important to consider these results in the context of the age of the children (8–12 years old). This is a developmental period of greater independence, yet connection with caregivers often remains strong. It also may be a time in which internalizing or externalizing problems become more apparent (e.g., Shiner & Caspi, 2003). Future investigations might build on existing research showing interactions between child behaviors and parenting overreactivity during this developmental time (Van den Akker et al., 2013) to incorporate the role of ED.

Regarding the unique effects of psychological symptoms, our results provided clear evidence for the association between maternal figure depressive symptoms and negative parenting behaviors across overall dysfunctional parenting behavior, overreactivity, laxness, and less warmth. Importantly, depression was significantly associated with lower maternal warmth over and above the effects of ED suggesting the particular importance of treating depression to promote maternal warmth and improve mother-child emotional connection. These findings add to the literature highlighting the detrimental impact of maternal depression on parenting (Cuijpers et al., 2015). In line with prior research, both PTSD (Cross et al., 2017) and substance use problems (Fraser et al., 2010; Hatzis et al., 2017), were associated with negative parenting behaviors, although patterns differed slightly. PTSD was associated with laxness and substance use was associated with overreactivity. The nonsignificant effect of psychological symptoms for overreactivity and laxness beyond the effect of ED demonstrates the value of focusing on ED as a direct treatment target as opposed to specific psychological disorders when addressing parenting risk in trauma-exposed families.

Though some parenting interventions incorporate strategies to improve affect regulation (Milligan et al., 2019), these are often a small component (e.g., a single session on mindfulness) of a larger treatment protocol focused on other areas. Our results suggest that future interventions should focus explicitly on ED, and directly target certain aspects of ED like emotional

clarity or managing goal-directed and impulsive behaviors. Interventions that teach emotion regulation skills, such as Skills Training in Affective and Interpersonal Regulation (STAIR) (Cloitre et al., 2002) and Dialectical Behavior Therapy (DBT) (Linehan, 1993), may be a good fit for inclusion in parenting interventions. Mindfulness-based approaches also target ED, and mindful parenting interventions have shown promise in improving parental overreactivity (Bögels et al., 2010). Finally, given the differential impact of psychosocial stressors on African American families, those that utilize ecological models of care and target ED as well, such as Parents Under Pressure (Barlow et al., 2013), developed for parents with substance use problems, show promise.

Limitations

The sample was relatively homogeneous, consisting of predominantly low income, African American women with significant trauma histories, and their 8-to-12-year-old children, which may limit the generalizability of study results. However, this population is understudied, underserved, and in high need of services (Priester et al., 2016). It is important to note that both measures of parenting behaviors showed lower levels of negative parenting behaviors than the treatment or control samples included in the original psychometric papers. This could mean that the women in the study show fewer negative parenting behaviors or there was underreporting of negative parenting behaviors. Another potential sample-related limitation pertains to the relatively low rates of alcohol and drug use; few women scored above the cutoff score for a likely diagnosis of a substance use disorder (Levola & Aalto, 2013; Yudko et al., 2007). Because individuals, particularly mothers, often underreport substance misuse (Fendich et al., 2004) due to perceived stigma or consequences, our results may underestimate associations between substance use and parenting behaviors. It is also possible that the recruitment from medical clinics in an urban hospital limited our likelihood of enrolling women with active substance use disorders, since many mothers with active substance use problems have difficulty accessing healthcare services. Future research on the effects of substance use on parenting behaviors would benefit from directly targeting clinics serving substance-using patients. An additional limitation relates to the methodology, notably the reliance on self-report measures except for PTSD. Although self-report measures are widely used, in large part due to their ease of administration, they have challenges related to the potential for response bias (e.g., social desirability) and less accuracy. The topics of parenting behaviors and mental health are sensitive and it is possible that the women who participated in this study did not feel comfortable sharing information about these topics during the interview. We also focused only on maternal figure care and we recognize this narrow focus leaves out the role of fathers. Finally, a significant amount of variance in parenting behaviors remained unexplained in our models; it is critical that comprehensive cumulative risk models be examined in future longitudinal research that include psychosocial, cultural, and health factors.

Clinical Implications and Conclusions

Improving efficacy in parenting interventions is key for reducing intergenerational trauma-related risk and the public health impact on families and children exposed to trauma. Parenting interventions vary widely across contexts; while parent management training programs are effective overall, their efficacy is limited in complex risk populations and the presence of higher ED may contribute to this (Crandall et al., 2015; Milligan et al., 2019). Emotion regulation is critical to effective parenting. Addressing ED in parenting interventions in a comprehensive, formalized, and trauma-informed way may be helpful in reversing patterns of intergenerational transmission of risk via negative parenting patterns. Such interventions must also accommodate the unique needs of low-income African American parents (McMahon et al., 2002), who may have increased barriers to engagement in treatment and may benefit from a culturally-informed approach.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Participants indicated no active child welfare action for the child included in the study at the time of assessment. Although it was not tracked through our study, it is possible that Division of Family & Child Services (DFCS) was involved in these families for other children or that custody had been lost with other children.
2. Thirty-one percent (n = 29) received the CAPS for DSM-IV and 69% received the CAPS-5. To combine CAPS-IV and CAPS-5 severity scores together, scores were weighted to balance the number of items (17 for CAPS-IV and 20 for CAPS-5) and factor in that scoring of frequency and intensity was separate in the CAPS-IV but combined in the CAPS-5.
3. CAPS sample size was n = 93

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