Child Psychiatry Hum Dev (2018) 49:452–459
DOI 10.1007/s10578-017-0764-6

ORIGINAL ARTICLE

Co-Occurring Posttraumatic Stress Disorder and Depression Among Young Children

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Published online: 19 October 2017

Abstract The purpose of this study was to examine differences in: (1) mental health emotional and behavioral problems between young children experiencing PTSD with and without MDD; (2) the incidence of caregiver PTSD and MDD between children with PTSD ± MDD; and (3) the number of traumatic events and interpersonal versus non-interpersonal nature of trauma events among children whose parents sought child trauma-focused treatment. Sixty-six caregivers of children aged 3–7 with PTSD completed semi-structured interviews regarding caregiver and child diagnoses, and caregivers completed self-report measures regarding child symptomatology. Results indicated that young children with PTSD + MDD had significantly higher internalizing symptoms, dissociative symptoms, and posttraumatic stress severity than those without comorbid MDD. There were no significant group differences in the incidence of caregiver PTSD or MDD, or the number or types of traumatic events. Future research to understand the unique contributors to the etiology of MDD in the context of PTSD among young children is needed.

Keywords Young children · Posttraumatic stress disorder · Depression · Comorbidity

Introduction

Research on comorbidity of posttraumatic stress disorder (PTSD) and depression in young children is limited [1]. However, studies with children [2], adolescents [3] and adults [4] have found strong positive associations between PTSD and depressive symptoms. The purpose of this study is to extend the research on PTSD and depression to a younger population. Due to diagnostic criteria and measurement challenges with young children and PTSD [5] and major depressive disorder (MDD: [6]) studies on the prevalence of these disorders in young children varies widely. Given the negative and cumulative impact that trauma can have during early childhood [1], young children who experience both PTSD and MDD are potentially at greater risk for a lower quality of life than those who experience PTSD alone. While research on differences in emotional and behavioral problems by number of traumatic events and type of trauma is limited among young children, there is some evidence [e.g., 7, 8] to suggest that young children with PTSD + MDD may have greater exposure to interpersonal trauma than non-interpersonal trauma and higher number of traumatic events than children with PTSD alone. Also, having a parent with PTSD and MDD may further compound

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the psychological burden for young children since these children are so dependent on their parents to help them cope. Thus, it is likely that young children with PTSD + MDD would have higher rates of parents with PTSD, MDD and PTSD + MDD than children with PTSD alone. Research is needed to understand the comorbid effects of PTSD and depression among young children, the role of parental PTSD and MDD and cumulative trauma on young children with PTSD with and without depression.

PTSD and Comorbidity

Research with adults suggests that comorbid MDD is associated with an increased level of psychiatric burden and impairment in comparison to PTSD alone. For example, in a study with 147 adults, adults with PTSD and MDD reported greater severity of PTSD and MDD symptoms, higher frequency of dissociation, and greater impairment in work, social and family functioning than adults with PTSD alone [9]. Further, adults who reported greater frequencies of trauma exposure (i.e., > 5 traumatic events) showed greater levels of depression severity than those with lower levels of trauma exposure [9]. Given these findings, it is likely that young children with PTSD and MDD may experience greater levels of psychiatric burden and impairment than children with PTSD alone.

Young children exposed to trauma are at risk for a range of other emotional and behavioral problems, such as internalizing and externalizing problems [10] including anger and aggression [11], anxiety [12], dissociation [13], and depression [8]. Comorbidity of diagnoses after being traumatized often occurs in children who have greater number of posttraumatic stress symptoms [8]. De Young, Kenardy [14] found that among young children who experienced injuries due to burns, comorbidity with PTSD and MDD, oppositional defiant disorder (ODD), specific phobia (SP) or attention deficit hyperactivity disorder (ADHD) occurred 73 and 85% of the time at the 1 and 6 month assessments, respectively. It may be that trauma exposure and PTSD contribute to the onset of new non-PTSD diagnoses [8]. However, given the overlap in symptoms among disorders, it is also possible that these new disorders are reflective of more global dysregulation that can occur in traumatized youth [15]. Given that comorbidity is commonplace among traumatized young children, it is important to understand and differentiate the impact of PTSD alone and PTSD comorbid with MDD in children.

Parent PTSD and MDD

Parent depression and PTSD have been associated with child PTSD [16, 17]. Depression among parents of young children exposed to violence has been linked to an increased likelihood of early childhood depression and behavioral problems [18]. Even when shared traumatic experiences (e.g., disaster) between the child and parent are controlled, parent distress strongly predicts child posttraumatic stress and behavioral problems [19]. There are several mechanisms that may contribute to the links between parental distress and child distress including shared experiences and perceptions, genetics, modeling and reinforcement, decreased parent–child interactions [17], negative changes in parenting practices, and tension among parents [20]. However, Scheeringa, Myers [21] caution against attributing young children's PTSS severity to insensitive parenting (as parents may meet the needs of their children in different ways), and highlight the importance of recognizing that children's responses also have an impact on parents (i.e., there is a bidirectional relationship). Nonetheless, young children are especially dependent on caregivers and parents' reactions to the trauma, and parental psychopathology can impact on the young child [22]. Further, The differential associations of parental PTSD and depression on the mental health emotional and behavioral problems of young children needs further exploration.

Type of Trauma and Cumulative Trauma

Given that research suggests an increased likelihood of PTSD plus major depressive disorder (PTSD + MDD) when adults experience multiple types of trauma [9], it is important to explore the role of cumulative trauma exposure and trauma type in understanding potential differences between those young children who develop co-occurring MDD versus PTSD alone. In young children, exposure to multiple traumatic events has been associated with increased risk of PTSD, posttraumatic stress severity, and greater internalizing and externalizing behavior problems [12]. Similarly, Hodges, Godbout [23] found that for children ages 8–12, the number of different types of interpersonal traumatic events was significantly associated with trauma-related symptoms (i.e., anxiety, depression, anger, posttraumatic stress, dissociation and sexual concerns). There is some evidence that the type of trauma might lead to different trauma-related problems. For example, exposure to interpersonal violence among two and three year olds was associated with depression, disruptive behavior and anxiety, while exposure to non-interpersonal violence was associated with anxiety [7]. However, research on the impact of type of events and cumulative trauma is still inconclusive, as there have been mixed findings with young children and youth. Scheeringa [8] found that the cumulative number of traumatic events (e.g., sum of 12 possible events), rather than total occurrences (sum of the number of lifetime occurrences of all types of traumatic events) of traumas or type of

events, was the strongest predictor of PTSD symptoms among young children, but cumulative trauma only accounted for 2% of the variance of number of PTSD symptoms. Further, McLean, Morris [24] reported the severity of PTSD symptoms among teenage females with a history of sexual abuse did not vary with the number of traumatic experiences. Given the early stage of literature on the topic of the type of trauma and cumulative trauma, further exploration is warranted with young children with PTSD with and without MDD to examine if those with more comorbidity may have experienced higher levels of traumatic events or interpersonal trauma than children with PTSD alone.

The Present Study

The current study extends the literature with young children with PTSD and co-occurring disorders, specifically MDD. There were three study aims. First, we examined differences in various mental health emotional and behavioral problems (e.g., internalizing and externalizing problems, impairment, PTS severity, depression, anger and aggression, and dissociation) between young children experiencing PTSD with and without MDD. Due to the nature of this study comparing young children with two or more disorders (PTSD + MDD) to young children without MDD, we expected that the PTSD + MDD group would have a greater number of psychiatric diagnoses. Given that greater levels of psychiatric burden (i.e., greater number of psychiatric disorders) are often associated with increased symptomatology [25, 26], we controlled for the number of diagnoses that the child presented with to assess the specific role of MDD. Further, given that PTS symptoms [1] and internalizing and externalizing symptoms may vary based on age and gender [27], age and gender were controlled to assess the role of MDD. Second, given the impact of parental emotional functioning on children, we compared the incidence of caregiver PTSD and MDD between these groups to assess whether poorer caregiver functioning may be associated with MDD in young children with PTSD. We expected higher rates of caregiver PTSD and MDD in children with PTSD and MDD compared to children without MDD comorbidity. Third, given the potential impact of cumulative trauma and interpersonal trauma on young children, we explored the number of traumatic events and interpersonal versus non-interpersonal events among children with PTSD + MDD compared to children without MDD comorbidity. We expected children with PTSD + MDD would have experienced higher numbers of trauma and greater interpersonal trauma than young children with PTSD alone.

Method

Participants

Participants for the current study were caregivers who sought community-based treatment for their children (aged 3–7) as part of an open trial [28] and randomized clinical trial [29] on stepped care versus standard care trauma-focused cognitive behavioral therapy (TF-CBT). Inclusion for the treatment studies were: (a) child was between the age of 3 and 7 years old and the child experienced at least one traumatic event after the age of three; and (b) child had five or more DSM-IV PTSD symptoms including at least one symptom in re-experiencing or avoidance. Exclusions included: (a) Psychosis, mental retardation or autism and any condition that limited the child or caregiver's ability to comprehend treatment and follow instructions; (b) child or caregiver actively suicidal; (c) child and caregiver not fluent in English; (d) if the child was on medication, the regimen was not stable for at least four weeks before enrollment; or (e) the caregiver was the perpetrator or the perpetrator was living in the same home as the child (see Salloum, Wang [29]). For the current study, secondary data from screening/baseline assessments (N = 79) from caregivers who provided data for consideration to participate in the treatment studies were considered. Data from 10 caregivers and their children were excluded due to the child not meeting criteria for PTSD and 3 were excluded due to the caregiver not completing all study measures. Therefore, for the current study, secondary data from 66 caregivers and their children from the previous studies [28, 29] were included. The majority of children completed the assessment with their mother (n = 58; 87.9%), with a smaller number of children completing the assessment with their father (n = 3; 4.5%); grandmother ($n = 3$; 4.5%), great aunt (n = 1; 1.5%) and aunt (n = 1; 1.5%). Caregivers' age ranged from 22 to 68 ($M = 33.44$; $SD = 8.77$; Median = 31.50; Mode = 29.00), and 59.1% (n = 39) were employed. Overall, 31 (47.0%) of caregivers had a diagnosis of PTSD, and 11 (16.7%) had a diagnosis of MDD.

Table 1 provides the demographics of the children. The majority (78.8%; n = 52) of the children had experienced more than one traumatic event (Range = 1–6; $M = 2.61$, $SD = 1.21$). The most common comorbid conditions were ODD (n = 42; 63.6%); SP (n = 33; 50.0%); ADHD (n = 28; 42.4%); MDD (n = 27; 40.9%); SAD (SAD; n = 26; 39.4%); social anxiety disorder (SoAD; n = 6; 9.1%); generalized anxiety disorder (GAD; n = 5; 7.6%) and obsessive compulsive disorder (OCD; n = 1; 1.5%).

Design and Procedures

This was a cross-sectional study that utilized secondary data from screening/baseline assessments conducted from

Table 1 Sample demographics (N = 66)

	PTSD + MDD (n = 27) *M*(*SD*)	PTSD without MDD (n = 39) *M*(*SD*)	*p*
Age	5.22 (1.34)	5.00 (1.43)	.527
Number of diagnoses	4.52 (1.45)	2.87 (1.34)	< .001
Number of trauma incidents	2.70 (1.23)	2.54 (1.21)	.591
	n (%)	n (%)	
Female	10 (37.04%)	20 (51.28%)	.253
Ethnicity			.052
Hispanic/Latino	14 (51.85%)	11 (28.21%)	
Not Hispanic/Latino	13 (48.15%)	28 (71.79%)	
Race			.739
White	21 (77.78%)	25 (64.10%)	
Black/African American	5 (18.52%)	10 (25.64%)	
Other	1 (3.70%)	4 (10.26%)	
Type of Trauma			.367
Interpersonal Trauma	22 (81.48%)	28 (71.79%)	
Not interpersonal Trauma	5 (18.52%)	11 (28.21%)	
Polytrauma[a]	22 (81.48%)	30 (76.92%)	.656
DIPA Comorbidity			
Oppositional defiant disorder	19 (70.37%)	23 (58.97%)	.344
Specific phobia	16 (59.26%)	17 (43.59%)	.211
Attention deficit hyperactivity disorder	14 (51.85%)	14 (35.89%)	.197
Major depressive disorder	27 (100.00%)	0 (0.00%)	< .001
Separation anxiety disorder	13 (48.15%)	13 (33.33%)	.226
Social anxiety disorder	4 (14.80%)	2 (5.13%)	.217
Generalized anxiety disorder	2 (7.40%)	3 (7.69%)	1.000
Obsessive compulsive disorder	0 (0.00%)	1 (2.56%)	1.000
Caregiver PTSD diagnosis	14 (51.85%)	17 (43.59%)	.571
Caregiver MDD diagnosis	7 (29.93%)	4 (10.26%)	.178
Caregiver comorbid PTSD + MDD	6 (22.22%)	4 (10.26%)	.297

PTSD Posttraumatic stress disorder, *MDD* Major depressive disorder

[a]Exposure to more than one traumatic event

an open [28] and randomized clinical trial [29] with children ages 3–7 who had experienced trauma. This study was approved by the University Institutional Review Board. Caregivers provided written consent, participated in semi-structured diagnostic interviews and completed self-report measures. Children did not attend the assessment. All assessments occurred in a private room in a community-based agency and were conducted by masters-level mental health professionals, who served as independent evaluators (IE) for the treatment studies. The IEs were trained by the developer of the Diagnostic Infant and Preschool Assessment (DIPA; [30]) and met weekly with a licensed clinical psychologist (last author), who is trained in psychological assessment and has extensive experience in assessments for childhood clinical trials. Caregivers were compensated $25 for their participation in the baseline assessment.

Measures

Diagnostic Infant and Preschool Assessment (DIPA; [30]) is a semi-structured, clinician-administered interview based on DSM-IV criteria and was administered with caregivers to assess child's exposure to trauma, PTSD diagnosis and impairment due to trauma symptoms, ODD, SP, ADHD, MDD, SAD, SoAD, GAD and OCD. The impairment due to trauma symptoms measure consisted of a total score of six questions scored present = 1 or absent = 0

(range 0–6) about impairment in the domains of parental, sibling, daycare/teacher, and peer relationships, ability to act appropriately outcome home or daycare/school and child distress due to trauma symptoms. For the current study the PTSD alternative algorithm (PTSD-AA; [31]) was used as these criteria were used to develop the new PTSD subtype for DSM-5 (APA) and are more developmentally sensitive for diagnosing PTSD in young children. The PTSD-AA more closely aligns to the PTSD subtype for young children in the DSM-5 than the DSM-IV [5]. The DIPA has demonstrated adequate test–retest reliability and acceptable criterion validity [30]. In the current sample, of the 29.25% PTSD interviews reviewed by a psychology doctoral student, the interrater agreement was excellent (Kappa = 0.93, $p < .001$).

Trauma Symptom Checklist for Young Children (TSCYC; [32] measures the frequency of the child's trauma-related symptoms in the past month using a 90-item 4-point Likert scale, which ranges from 1 (not at all) to 4 (very often). For the current study, the following subscales were used: posttraumatic stress symptom total (27 items), depression (9 items), anger/aggression (9 items), anxiety (9 items), and dissociation (9 items). The validity subscale scores (response level scale and atypical response scale) and sexual concerns subscale scores were not included in this study as these variables do not pertain to the research questions. Raw scores were converted into T-scores (scores 70 > are considered clinically elevated). Internal consistency was good for this sample (posttraumatic stress symptom total $\alpha = 0.90$; depression $\alpha = 0.81$; anger/aggression $\alpha = 0.92$; anxiety $\alpha = .78$; and dissociation $\alpha = 0.93$).

Clinical Global Impressions—Severity (CGI-S; National Institute of Mental [33]) is a one-item 7-point Likert scale ranging from 0 (no illness) to 6 (extremely severe symptoms/completely nonfunctional) to measure overall severity of symptoms and functional impairment. This measure was completed by the IE in consultation with the last author. Interrater agreement between the IE and independent rater was acceptable (Kappa = 0.75, $p < .001$).

Child Behavior Checklist (CBCL; [34, 35]) is a widely used psychometrically sound caregiver self-report of the child's emotional and behavioral problems. The current study utilized both the 1½ to 5-year old version and the 6 to18-year old version. T scores for internalizing and externalizing problem were used (a T score of > 63 indicates the clinical range for problems based on the child's gender and age).

Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research Version (SCID: [36]) is a widely used structured interview for adult psychopathology. The PTSD and depression modules were used to assess for caregiver PTSD and depression.

Data Analysis

Descriptive statistics are reported for caregiver and child demographic variables. Group differences on continuous demographic variables were assessed using independent samples t-tests. Chi square tests were used for categorical variables, or Fisher's Exact test in cases where cell sizes were less than 5. Analysis of covariance was used to assess group differences on clinical variables, controlling for age, gender, and number of diagnoses. Given the exploratory nature of analyses a significance level of $p < .05$ was used for all analyses.

Results

There were no group differences in terms of age, number of traumatic incidents experienced, gender, ethnicity, race, or whether they experienced interpersonal trauma (see Table 1). On average, children in the comorbid MDD group had a significantly high number of psychiatric diagnoses compared to youth without MDD comorbidity. There was no significant difference in the proportion of caregivers who had a diagnosis of PTSD between the comorbid MDD group and the group without MDD. Although almost one-third (29.93%) of caregivers of young children with comorbid MDD also had a diagnosis of MDD compared to 10.26% in the other group, this difference was not statistically significant. A post hoc power analysis indicated that this analysis had 74.5% power to detect a difference for this analysis. Further post hoc exploratory analysis of caregivers with PTSD + MDD (N = 10; 15.15%) also indicated no differences between groups. There was no significant difference in the proportion of children who had polytrauma and inter-personal/non-personal trauma between the comorbid MDD group and the group without MDD.

Table 2 summarizes group differences on clinical variables. After accounting for the role of age, gender, and number of psychiatric diagnoses there was no statistically significant difference between the groups on measures of PTSD severity, externalizing problems, impairment, depressive symptoms, anger/aggressive symptoms, or anxiety even though the comorbid group showed consistently higher levels of symptoms across all measures. However, children with comorbid MDD showed significantly greater overall psychiatric symptom severity on the CGI-S, higher levels of internalizing symptoms and greater dissociative symptoms.

Discussion

The present study examined differences in psychiatric outcomes, parental PTSD + MDD, and trauma characteristics

Table 2 Estimated marginal means (standard error) for indices of clinical phenomenology across groups controlling for gender, age and number of diagnoses

	PTSD + MDD	PTSD without MDD	F	η_p^2
CGI-S	4.57 (0.15)	4.01 (0.12)	7.52**	0.11
CBCL internalizing	68.48 (1.84)	62.91 (1.48)	4.89*	0.07
CBCL externalizing	65.51 (2.28)	63.04 (1.83)	0.62	0.01
DIPA-impairment	4.45 (0.28)	3.87 (0.23)	2.22	0.04
TSCYC PTS total	91.94 (3.68)	85.56 (2.96)	1.59	0.03
TSCYC depression	76.52 (3.78)	70.21 (3.04)	1.48	0.02
TSCYC anger/aggression	74.90 (3.46)	70.87 (2.78)	0.72	0.01
TSCYC anxiety	73.58 (4.14)	71.28 (3.38)	0.19	< 0.01
TSCYC dissociation	74.99 (3.82)	63.49 (3.07)	4.79*	0.07

CBCL child behavior checklist, *CGI–S* clinical global impressions – severity, *DIPA* diagnostic infant and preschool assessment, *TSCYC* Trauma symptom checklist for young children, *PTS* posttraumatic stress symptoms

*$p < .05$, **$p < .01$

among young children with PTSD + MDD and young children with PTSD alone. Young children with PTSD + MDD had greater psychiatric burden with a higher number of diagnoses. Although young children with comorbid MDD showed a pattern of elevated symptoms across externalizing, PTS impairment and symptoms, depression, anger/aggression and anxiety, this difference was not statistically significant from the group with PTSD alone, suggesting little difference in their overall clinical profile. However, as would be expected, young children with PTSD + MDD showed higher levels of internalizing symptoms and dissociation. While PTS total scores and impairment did not show significant differences between groups, the overall pattern of PTS severity and impairment ratings indicates that children with PTSD + MDD tended to have more severe PTSD burden. Similar to the pattern of greater symptomatology for children with PTSD + MDD, the children with PTSD + MDD had higher proportions of polytrauma, and interpersonal trauma, and higher rates of caregivers with PTSD and MDD, than children with PTSD alone, but these differences were not significant.

Similar to other studies [e.g., 1, 8], young children with PTSD experienced various comorbid conditions. Scheeringa [8] suggests that many of these comorbid conditions may have arisen after the trauma suggesting that treatment should target PTSD first. However, the current study findings that young children with PTSD + MDD experienced higher internalizing symptoms, dissociation and posttraumatic stress severity have implications for treatment. For example, Wamser-Nanney, Scheeringa [37] found that children with lower levels of depression, PTSD, anxiety symptoms and fewer trauma types showed early treatment response. Mannarino, Cohen [38] found that the small subset of children who continued to meet criteria for PTSD 12 months post trauma-focused cognitive behavioral therapy had higher levels of internalizing and depressive symptoms pre-treatment. In the current study, not only were dissociative symptoms higher amongst the group with PTSD + MDD, but the average scores were clinically elevated, while average scores in the PTSD only group were not. Thus, similar to findings in the adult literature what has indicated greater psychiatric risk for adults with PTSD + MDD [9], young children with PTSD + MDD appear to be at slightly higher psychiatric risk for than children with PTSD alone.

While non-significant differences were found between young children with PTSD with and without MDD and caregivers with MDD, as expected, the group with PTSD + MDD had a higher percentage of caregivers with MDD. Non-significant differences may have been due to the small sample of caregivers with MDD, although a post hoc power analysis suggested that this was unlikely to be the case. Further post hoc exploratory analysis of caregivers with PTSD + MDD also indicated no differences between groups. While there is strong evidence for the association of maternal distress (i.e., anxiety, depression and PTSD) and child PTSD and behavior problems [16, 21] other factors such as parenting behaviors, bidirectional effects of parents and children [21], genetics and environmental influences [39] can influence the relationship between caregiver and child distress. More complex models examining the interaction of genetics, environment and development are needed to understand the associations and intervening variables related to caregiver and child PTSD + MDD.

Contrary to expectations, children with PTSD + MDD did not have higher numbers of traumatic events or greater interpersonal trauma than young children with PTSD alone. However, our understanding related to trauma exposure characteristics and emotional and behavioral problems among children, including young children, remains limited given that some studies found differences in psychiatric outcomes, including depression, based on cumulative or types of trauma (e.g., [7, 23], and others

found few [8]) or no differences in PTS [24]. While it seems likely that as young children experience traumatic events, and when these events involve the young child's primary caregiver, these children are more at risk for psychiatric burden, there are other potential variables that may influence the relationship between trauma and distress. For example, Scheeringa et al. [21] highlight the impact of pre-trauma individual differences and prevalence of current environmental trauma reminders that also contribute to symptom severity rather than just the repetition of the trauma occurrences or type of trauma.

Limitations

While the current study adds to the limited literature on comorbidity of PTSD + MDD among young children, there are several limitations. First, the cross-sectional nature of the study does not allow for determination of the temporal or causal relationship between PTSD + MDD and multiple diagnoses, internalizing symptoms, dissociation, and PTS severity. Although, in an attempt to untangle psychiatric comorbidity among young children who experience trauma, Scheeringa [8] that suggest that comorbid disorders following trauma often arise in the presence of posttraumatic stress after exposure to trauma. Second, the small treatment seeking sample from one community agency for this exploratory study is a limitation. Studies with larger samples will allow for more complex comparisons among groups that statistically adjust for multiple comparisons to elucidate the impact of MDD among young children with PTSD. Third, interrater agreement was only conducted for the PTSD module on the DIPA and not the SCID. Future studies should conduct interrater agreement for all clinical interviews. However, it is to be noted that regular supervision on all assessments occurred between the IE and the last author who is trained in assessment with these measures. Lastly, while we included a measure of impairment that measured the number of domains the child was impaired in (e.g., parental, sibling, daycare provider or teacher, peer relationships, ability to act appropriate in public places), this measure was limited to presence or absence rather than a variable measure of the severity of impairment with in the domains. Also, while the PTSD measure was adjusted to more closely reflect DSM-5 diagnosis, the other diagnoses were based on DSM-IV criteria. Future studies on young children with PTSD, MDD and other psychiatric disorders is needed to examine the impact of these recently defined diagnoses on child development and current functioning in the child's and parents' daily lives.

Summary

The developmental period of early childhood is a potentially vulnerable time for young children, and this vulnerability increases for young children exposed to trauma. Findings that caregivers with PTSD and MDD do not seem to increase the child's risk of depression suggest that there are other specific vulnerabilities in certain children with PTSD. There are effective treatments for young children with PTSD due to cumulative trauma and different types of trauma [e.g., 40] but there is also evidence that children with high internalizing symptoms and depressive symptoms at pretreatment may indicate a subset of children less likely to respond to treatment [38]. Therefore, the current study findings that suggest higher PTS severity, internalizing symptoms and dissociation among children with PTSD + MDD have practice implications. These children may need more intensive and/or targeted treatment that addresses the additional psychiatric burden. However, it seems prudent to research further the clinical profile and characteristics of young children with PTSD + MDD and the factors that contribute to differences among young children with and without MDD so that effective targeted treatments can be developed for this subpopulation.

Acknowledgements The study was supported by a National Institute of Mental Health award assigned to Alison Salloum (R34MH092373). The content is solely the responsibility of the authors and does notnecessarily represent the official views of the National Institute of Mental Health or the National Institutes of Health. We provide a special acknowledgement of gratitude to theCrisis Center of Tampa Bay, a community-based agency that has been a valuable partner in conducting community-based trauma-focused research.

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