ORIGINAL ARTICLE



What About the Parents? Changes in and Correlates of Parents' Discrete Emotional Reactions to their Child's Trauma in Trauma Therapy

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Abstract

Parents experience differentiated emotions after learning of their child's abuse; however, little is known about the effect of trauma therapy on these differentiated reactions and the factors associated with these reactions. This study examined the impact of child trauma therapy on parents' distress, guilt, and shame over the course of treatment and following treatment, the correlates of these emotional reactions before treatment, and the correlates of changes in these reactions. The sample at pre-therapy included 92 trauma-exposed children (68.90% female, Mage = 9.58 years, 38.10% Caucasian) and their parents receiving Trauma-Focused Cognitive Behavioural Therapy (TF-CBT). Parents rated their distress, guilt, and shame, their functioning (stress-levels, parent support), and their child's functioning (emotion regulation and internalizing/externalizing symptoms) at pre-therapy, post-therapy, and 6-month follow-up. Significant modest-to-large improvements in parent distress, guilt, and shame were found immediately following TF-CBT and from pre-therapy to 6-month follow up. Parent and child functioning, as well as characteristics of the child's abuse, accounted for a significant proportion of the variance in parents' distress, guilt, and shame prior to treatment, with child internalizing symptoms being a consistent correlate. Changes in parent support and child internalizing symptoms were associated with changes in parent distress and shame over the course of TF-CBT, and changes in child externalizing symptoms were associated with changes in parents' shame from pre-therapy to follow-up. Improvements in parents' discrete emotional reactions were observed throughout TF-CBT and months after therapy has ended. The implications of results, as related to the key factors associated with these reactions, are discussed.

 $\textbf{Keywords} \ \ Child \ trauma \cdot Parent \ emotional \ reactions \cdot Trauma \ therapy \cdot Parent \ support \cdot Internalizing \ symptoms \cdot Externalizing \ symptoms$

Introduction

Child maltreatment occurs with concerning frequency, and although many children are resilient after exposure, a subset of children and families go on to be profoundly affected across the lifespan (Cicchetti, 2016). Both theoretical and

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empirical literature posit that child trauma can lead to a host of physical, psychological, and socio-emotional difficulties that can persist into adolescence and adulthood (e.g., Hughes et al., 2017). The ways in which non-offending parents (i.e., parents who have not perpetrated abuse against their child) sensitively respond to their children after a trauma experience plays an important role in their children's recovery.

Parents serve as external regulators of children's traumarelated responses, and their warmth and responsivity to their children's distress has been associated with lower child lability/negativity and greater self-regulation (Cole et al., 2009). Some studies that have examined risk and protective factors for impairment after trauma have found that the quality of parents' support is a strong predictor of short- and long-term mental health outcomes in children who have experienced trauma (Bolen & Gergely, 2015). Furthermore, studies on treatment for children after trauma suggest that parents *can*



support their child's resilience by being involved in the emotional processing of the child's abuse (Cohen et al., 2017; Yasinski et al., 2016). Parents can also facilitate or hinder their child's resilience after trauma due to their own emotional reactions (Cohen & Mannarino, 1996). For example, emotionally overprotective and frightening responses may be perceived by the child as dismissive or anxiety-provoking and, in turn, can exacerbate a child's psychological symptoms after abuse (e.g., Scheeringa & Zeanah, 2001). Parents' feelings of competence and stress have been found to mediate the outcomes of child sexual abuse for the child (e.g., Elliott & Carnes, 2001; Schuetze & Eiden, 2005). Thus, it is important to respond to such emotional effects experienced by parents and to examine parents' emotional reactions to their child trauma as an outcome in its own right.

Several studies (e.g., Cohen & Mannarino, 2000; Holt et al., 2014a; Williamson et al., 2016) have found that parents develop a range of negative emotions after learning of their child's trauma, such as sadness, fear, distress, worries regarding safety, decreased personal satisfaction with parenting, and feelings of blame. Some parents also experience anger directed at the perpetrator that harmed their child (Cohen & Mannarino, 2000). In cases where the parent is aware of the identity of the perpetrator, they often wish that they had not trusted the perpetrator; and thus, feelings of guilt and shame may be strong in these circumstances (Holt et al., 2014a).

Since parents experience a broad range of negative emotions after learning about their child's trauma experience, it is important to continue to understand the different factors that explain these emotional reactions. Factors such as the severity and duration of the abuse have been inconsistently associated with child affective symptomatology (e.g., Adams et al., 2018; Yancey & Hansen, 2010), but they may also be important correlates of parent affective symptomatology in the context of their child's trauma experience. Child behavioural problems (i.e., delinquent or aggressive behaviours) have been predictive of higher levels of stressful parent reactions when children have been sexually abused; however, findings are inconsistent when children have endured multiple forms of trauma (i.e., polyvictimization) and physical or emotional abuse (Cohen & Mannarino, 1998a). Lower support provided by parents to their child after a traumatic event, as well as the tendency to blame one's child for the abuse, have also been linked to parents' feelings of distress, guilt, and shame (Holt et al., 2015). Those parents whose children are involved in criminal trials experience more distress related to both the trial itself and added general life stresses than those that are not involved (Burgess et al., 1990). The identity of the perpetrator may be another correlate of parents' negative emotional reactions. Parents are more likely to blame themselves and experience more adverse emotional reactions when the perpetrator is a family

relative (Ullman, 2007). For example, when the perpetrator is a stepparent, sibling, cousin, or other close relative, parents report blaming themselves and feeling ashamed for not paying close enough attention to the relationship between the child and perpetrator (Ullman, 2007). Some parents are also left feeling uncertain if the perpetrator denies the allegations made by the child (Plummer, 2006). Even parents who are supportive and protective may display inconsistent emotional reactions (Elliott & Carnes, 2001). For example, while a mother may believe her child's allegation of abuse, she may also have difficulty believing that her husband could have abused their child. Additionally, a parent may be supportive of their child's practical needs (e.g., physical support and protection), but unsupportive of their child's emotional needs (e.g., validation and empathy; Elliott & Carnes, 2001) due to their own adverse emotional reactions. The limited emotional support provided to the child may, in turn, generate complex emotional reactions (e.g., enhanced guilt and shame, limited empathy) for the parent.

Intervening and Addressing Parents' Negative Emotional Reactions to Child Trauma

To address the emotional needs of maltreated children, trauma-focused treatment that involves the child and parent is an important aspect of effective intervention. Trauma-Focused Cognitive Behavioural Therapy (TF-CBT; Cohen et al., 2017) involves both the child and parent in therapy. The TF-CBT model may help the child to learn skills to speak about the trauma openly and to use the parent as a supportive agent in the process. Throughout TF-CBT, the participating parent may come to understand their child's reactions to, and perceptions of, the abuse, and there is a focus on improving child-parent interactions, communication, and closeness (Cohen et al., 2017). The founders of TF-CBT suggest that including the nonoffending parent in treatment may provide parents with techniques that they can use to address their own maladaptive coping and help maximize the benefits of the intervention for their child by modelling skills during and after treatment (Cohen et al., 2017).

Improvements in parent stress and parent support of the victimized child, as well as improvements in children's internalizing and externalizing symptoms and emotion regulation, have been observed over the course of TF-CBT and are reported in a series of studies (e.g., Bambrah et al., 2018; Konanur et al., 2015). However, to date, only a few studies have examined the impact of therapy on parents' emotional reactions to child trauma. For example, one study found that the parents of school-aged sexually abused children receiving a cognitive behavioural intervention to treat trauma symptoms experienced greater improvements in their trauma-specific distress compared to parents of sexually abused children receiving child-centered therapy,



a non-directive dyadic treatment modality (Cohen et al., 2004). Another study by Holt, Jensen, and Wentzel-Larsen (2014b) examined whether parents reported changes in their own negative emotional reactions and depressive symptoms over the course of TF-CBT and Therapy as Usual. The results showed that parents in both conditions experienced a significant reduction in negative emotions and depressive reactions from pre-therapy to post-therapy (Holt et al., 2014b). Earlier TF-CBT studies have examined how parents' global negative emotions predict other therapy outcomes, such as emotional and behavioural symptoms, for abused children (e.g., Cohen & Mannarino, 1996, 1998b, 2000)—thereby bolstering the importance of examining parents' emotions in response to their child's trauma.

Notwithstanding the above-noted results, there is a paucity of studies that have explored parents' discrete negative emotional reactions to their young child's abuse within the context of trauma therapy. The above-noted study by Holt and colleagues (2014b) examined changes in parents' overall negative emotions throughout TF-CBT, specifically for a sample of victimized adolescents (mean age = 14.80). These authors noted that parents' emotional responsiveness to trauma therapy may vary at different developmental stages, and therefore, investigating parents' emotional reactions among a younger sample of trauma-exposed children is warranted. Children require less assistance in regulating their emotions as they age, and there is a strong body of evidence to support that parents play an important role in children's development of emotion regulation in earlier years (e.g., Eisenberg et al., 1998; Jones et al., 2002). As each emotion is associated with its own underlying needs and concomitant action tendencies (e.g., Lowe & Ziemke, 2011), parents' discrete emotional responses and expressivity (often through parenting behaviours) may provide important models by which children learn to express their own emotions and learn to regulate emotional expressivity. For example, when parents display high levels of anger or distress, children are less likely to learn appropriate ways to regulate and express their own anger and distress and, instead, express these emotions with externalizing behaviours (Frankel et al., 2012; Hakulinen et al., 2013). Examining how trauma therapy affects parents' discrete emotions can provide insight into specific areas of emotional functioning that are less amenable to change and that can subsequently affect children's own functioning.

In our review of the literature, we found one instrument that measures a diverse set of parents' emotional responses to their children's traumatic experiences. This instrument, the *Parent Emotional Reaction Questionnaire* (PERQ; Mannarino & Cohen, 1996), consists of items that describe different types of emotional reactions, but it has primarily been used as only one unified scale with one factor (e.g., Holt et al., 2014b). However, given that child trauma can

affect parents in different ways, understanding the distinct emotional experiences of parents is critical. One study evaluated the factor structure and the discriminant validity of the PERQ and found that the measure has a three-factor structure—distress, guilt, and shame—that capture meaningfully different feelings that parents experience after their child has endured trauma (Holt et al., 2015). Significant changes from pre-to-post therapy in all PERQ subscales when Norwegian adolescent-parent dyads received TF-CBT were found in this study, which suggests that the subscales are sensitive to change and may be useful in effectiveness studies conducted among community samples.

Current Study

We posit that identifying and understanding the discrete emotional reactions of parents throughout the course of treatment should be an important aspect of trauma-focused therapy, given the above-reviewed effects of parents' negative emotional responses on parent support and child behavioural and socio-emotional outcomes. Furthermore, to our knowledge, no research study to date has examined changes is PERQ subscales throughout TF-CBT amongst a sample of young trauma-exposed children. Further, we are unaware of a study that has examined the degree to which changes in parent and child mental health functioning relates to changes in parents' discrete emotions over the course of trauma therapy. The Healthy Coping Program, a multisite, provinciallyfunded, clinical-research project, was developed to examine the impact of TF-CBT on young children (7 to 12 years of age), who have endured trauma.

The current study had three objectives. First, we investigated whether parents' distress, guilt, and shame improved over the course of TF-CBT (i.e., from pre-therapy to posttherapy) and from pre-therapy to 6-month follow-up. Second, we explored the relationships of parent functioning (i.e., parent stress and support of the child), child functioning (i.e., internalizing and externalizing symptoms, lability/ negativity, emotion regulation), and factors of the abuse (i.e., the number of traumas the child experienced before seeking treatment—polyvictimization, length of time since the abuse, type of perpetrator) with parents' distress, guilt, and shame prior to TF-CBT. Lastly, we examined the degree to which changes in parent and child functioning over the course of TF-CBT were associated with improvements in distress, guilt, and shame among parents, from pre-therapy to post-therapy and from pre-therapy to 6-month follow-up. We hypothesized that: (1) Parent distress, guilt, and shame would decrease from pre-therapy to post-therapy and from pre-therapy to 6-month follow-up; (2) Prior to TF-CBT, parent stress, children's internalizing and externalizing behaviours, lability, and poor emotion regulation abilities, as well as polyvictimization and low parent support, would be



associated with greater distress, guilt, and shame in parents (no predictions were made about the length of time since the abuse and perpetrator type); and (3) Decreases in parent stress and child internalizing and externalizing symptoms, lability, as well as increases in parent support and child emotion regulation, would be associated with improvements in parents' distress, guilt, and shame from pre-therapy to post-therapy and from pre-therapy to 6-month follow-up,

Method

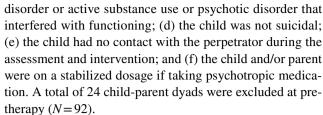
Participants

Children with prior exposure to abuse or violence and their primary caregivers voluntarily participated in the current study and were recruited from the Boost Child and Advocacy Centre, formerly the Toronto Child Abuse Centre. Ethics approval was granted by York University's Human Participants Review Committee and by the participating treatment agencies.

The sample at pre-therapy consisted of 92 child-parent dyads (68.90% female children). The children's ages ranged from 7 to 12 years (M=9.58, SD=1.61). Most children (78.60%) were referred for intervention due to sexual abuse and had experienced multiple types of traumas (86.90%). Twenty-five percent of children had a prior mental health diagnosis and roughly six percent of children (5.4%) were taking a psychotropic medication upon referral to TF-CBT. Participating caregivers were largely biological mothers (83.30%). Parents' ages ranged from 25 to 72 years (M = 37.23, SD = 8.13). Majority of parents were single (31.50%) and 52.90% had at least some university/college education. Roughly a quarter were stay-at-home parents (23.10%), with 57.10% of families reporting an annual household income of \$39,999 or less. Finally, 12.50% of parents were taking psychotropic medication upon referral to treatment, however additional data on parent mental health (i.e., if the parent had a diagnosis, prior psychiatric or trauma history) were not collected. Approximately 22 percent of child-parent dyads (21.60%) were involved with child welfare at the time of treatment. A breakdown of all child and parent demographic characteristics are presented in Online Resource 1.

Procedure

Child-parent dyads were eligible to participate in the Healthy Coping Program if: (a) the child's trauma experience was substantiated by a child welfare agency and/or police; (b) the non-offending parent was willing and able to participate in assessment and treatment (i.e., no court-mandated cases); (c) the child and parent did not have a developmental



Trauma-focused cognitive behavioural therapy (TF-CBT; Cohen et al., 2017) entailed weekly individual sessions with the child and parent separately. The components of TF-CBT are provided to both the child and parent in parallel sessions. The components can be summarized with the word "PRACTICE": psychoeducation and parenting skills, relaxation techniques, affective regulation skills, cognitive coping skills, trauma narrative and cognitive processing of the traumatic event, in vivo mastery of trauma reminders, conjoint child-parent sessions, and enhancing personal safety and future growth. Child sessions include increasing understanding and skills in affective expression and coping; tracking and modifying automatic thoughts; problem solving; healthy sexuality; developing and strengthening relationship and social skills; and forming a "trauma narrative", which consists of gradual exposure exercises that facilitate the child's discussion and processing of the abuse. Parent sessions focus on their emotional reactions to their child's abuse or trauma, including discussions around the expression of appropriate emotions, use of appropriate behaviour management skills, and enhancing their support of their child. In the last third of treatment, child-parent sessions are held. Conjoint sessions aim to help children and parents practice the skills they learned during their individual sessions and for the child to share their trauma narrative, which is used to help children and parents make sense of their experiences and acts as a form of exposure to painful memories. All child-parent dyads who remained in the treatment (and study) until posttherapy participated in conjoint sessions.

Therapists and Model Adherence

Thirty-three therapists participated in the study and each clinician saw an average of 2.23 clients (SD=1.61, range = 1–8) and each agency serviced an average of 9.57 clients (SD=4.79, range 1–16). Clinicians had a Master's degree in social work or psychology and were required to have previous experience working with trauma-exposed children. To ensure adherence to the TF-CBT model, clinicians were required to (a) read the TF-CBT training manual; (b) attend TF-CBT trainings given by experts in the field; (c) meet in monthly facilitation groups to review questions regarding the TF-CBT model and to review cases; (d) receive ongoing training and supervision by a psychologist with extensive TF-CBT experience at their agency; and (e) complete an adherence checklist



following each therapy session. For more information about how clinicians were trained and model adherence, refer to Konanur et al. (2015).

Measures

Parents completed measures at three time-points: pre-therapy (i.e., after initial assessment but prior to beginning therapy), post-therapy, and at 6-month follow-up. Pre-therapy data were available for 92 child-parent dyads; and of these dyads, 55.43% completed measures at post-therapy and 43.48% completed measures at 6-month follow-up. Online Resource 2 presents the mean scores and Cronbach's alpha of all measures at each time-point.

Parent Functioning and Outcomes

Parent Stress

The Parental Stress Index (PSI 4th Ed.; Abidin, 2012) assessed the level of parent stress resulting from child characteristics and parents' own characteristics. The Child-Domain subscale comprises items related to sources of stress brought on by child characteristics, including child distractibility/hyperactivity, adaptability, reinforces parent, demandingness, mood, and acceptability. The *Parent-Domain* subscale comprises items related to sources of stress brought on by parent characteristics, including parent competence, isolation, attachment, health, role restriction, depression, and spousal relationship. Parents provided responses using a 5-point rating scale, with higher scores denoting more severe parent stress. Previous studies report excellent internal reliability for the Child- and Parent-Domains (i.e., 0.96 or greater). In the current study, the internal consistency for the two domain subscales was good-to-excellent from pre-therapy to 6-month follow-up, with Cronbach's alpha ranging from 0.88 to 0.95.

Parent Support

The Parental Support Questionnaire (PSQ; Mannarino & Cohen, 1996) was used to measure parents' perception of their own supportive behaviours toward their child after the traumatic experience. In the current study, the 8-item Support subscale was included. Parents rated each item using a 5-point rating scale (1 = Never to 5 = Always), with higher scores indicating greater support in the last two weeks. Previous research found internal consistency of $\alpha = 0.84$ for the Support subscale (Holt et al., 2015). In the current study, the PSQ reliability from pre-therapy to 6-month follow-up was good-to-excellent (α range = 0.87 to 0.91).

Parent Emotional Reactions

The 14-item Parent Emotional Reaction Questionnaire (PERQ; Mannarino & Cohen, 1996) was our outcome measure of the different types of emotional responses that parents experienced towards to their child's most severe traumatic experience. The PERQ is comprised of three subscales, distress (e.g., "I have felt sad about my child being abused/ traumatized"), guilt (e.g., "I feel that I should have been able to keep the abuse/trauma from happening"), and shame (e.g., "I am afraid of what other people will think about my child being abused/traumatized"), in order to capture clinically meaningful parent emotional reactions to children's abuse (Holt et al., 2015). Parents rated each item (1 = Neverto 5 = Always), with higher subscale scores indicative of stronger feelings towards their child's abuse. The PERQ has been previously used in treatment studies (Cohen & Mannarino, 1996, 1998b, 2000; Cohen et al., 2004) that show that parents' emotional reactions are related to their children's adjustment. Previous research also suggests good psychometric properties for the three subscales (Holt et al., 2015; Mannarino & Cohen, 1996). The subscales had acceptableto-excellent internal reliability at all three time-points (α range = 0.77 to 0.92) in the current study.

Child Functioning

Internalizing and Externalizing Symptoms

The 118-item *Child Behaviour Checklist* 6–18 (CBCL 6–18; Achenbach & Rescorla, 2001) measured parents' reports of their child's internalizing (e.g., anxiety) and externalizing (e.g., aggression) symptoms within the past 6 months. The measure is rated on a 3-point rating scale (1 = Not true, 3 = Very true/Often true). Higher subscale scores denote more problematic internalizing and externalizing symptoms. Good convergent, discriminant, and predictive validity have been demonstrated in normative, clinical, and diverse samples, as well as excellent internal consistency for the internalizing ($\alpha = 0.90$) and externalizing subscales ($\alpha = 0.94$; Achenbach & Rescorla, 2001). In the current study, the internalizing and externalizing subscales had good internal consistency at pre-therapy, post-therapy, and 6-month follow up (α range = 0.88 to 0.90).

Emotion Regulation

Children's emotion regulation was assessed with the parent-report *Emotion Regulation Checklist* (ERC; Shields & Cicchetti, 1997), which is scored on a 4-point Likert scale (1 = Never, 2 = Sometimes, 3 = Often, 4 = Almost always) and is comprised of two subscales: emotion lability/negativity (mood swings, anger, and intensity of emotions) and



emotion regulation (understanding of emotions, adaptive regulation, and empathy). For the former subscale, higher scores denote more severe/intense negative emotions, and for the latter subscale, higher scores are indicative of better emotion regulation abilities. Good internal consistency has been shown for the emotion lability/negativity (α =0.90) and emotion regulation (α =0.79) subscales. In the current study, internal consistency for the two subscales at pre-therapy, post-therapy, and 6-month follow-up were acceptable-to-good (α range=0.73 to 0.88).

Characteristics of the Abuse

The current study examined three characteristics of the child's trauma as potential correlates of parents' negative emotional reactions. For children who experienced multiple forms of trauma, the most severe trauma that the child had undergone was collaboratively determined by the nonoffending caregiver and the clinician who interviewed the caregiver during the intake stage of the Healthy Coping Project. This trauma was substantiated by a child welfare agency and/or police, and additional traumas experienced by the child were parent-reported during the intake. The first characteristic was the total number of traumas the child had experienced prior to seeking treatment: polyvictimization.¹ In the current study, the average number of traumas that children reported was up to 5 (M = 4.56, SD = 2.98, range 1–14). The second feature was the *perpetrator* of the most severe trauma the child had undergone. The perpetrator was grouped into 1 of 4 categories: biological or adoptive parent (28.70%), stepparent or sibling (8.30%), adult/peer who is a relative (e.g., uncle, aunt, cousin, etc.; 14.80%), or adult/peer who is not a relative (e.g., neighbour, teacher, etc.; 48.15%). For subsequent analyses, non-relative adults or peers was our control group. Finally, we measured the duration of time since the child's trauma. The length of time between children's abuse experience and their referral to clinical services was variable: 0–3 months (22.10%), 4–6 months (26.00%), 7–9 months (10.60%), 10–12 months (10.60%), and over 12 months (30.80%).

¹ Polyvictimization was computed with a total of 24 types of trauma, with 14 being the greatest number of traumas reported in the current study: sexual abuse, physical abuse, witnessing DV, verbal abuse at home, physical abuse at home, neglect, death/illness of a loved one, injury of a caregiver as a result of DV, sexual assault, sexual interference, invitation to sexual touching, sexual exploitation, sexual assault with a weapon, assault, witness/victim of a serious accident, witness/victim of community violence, fire/natural disaster, medical trauma, exposure to war/ethnic conflict, witness/victim of terrorist attack, divorce/separation, bullying/assault by a peer, and unspecified trauma.



Results

Data Analytic Plan

First, paired-sample t-tests examined whether parents' distress, guilt, and shame changed over the course of TF-CBT (i.e., from pre-therapy to post-therapy), from post-therapy to 6-month follow-up, and from pre-therapy to 6-month followup. A one-tailed significance test was used, following from the directional hypothesis that parent emotional reaction scores would be higher at pre-therapy than at post-therapy and at follow-up. Second, three separate multiple linear regressions were conducted to test the roles of parent and child functioning, as well as characteristics of the abuse, on parents' distress, guilt, and shame prior to TF-CBT. A onetailed test was used, following from a directional hypothesis; greater parent stress, child internalizing and externalizing behaviours, child lability/negativity, and polyvictimization, as well as lower parent support and lower child emotion regulation abilities, would be associated with more distress, guilt, and shame among parents prior to TF-CBT. A twotailed test was used for examining the roles of perpetrator identity and the length of time since the abuse, as no directional hypotheses were made about these trauma characteristics. Third, the degree to which changes in distress, guilt, and shame over the course of TF-CBT were related to improvements in parent and child functioning (i.e., from pre-therapy to post-therapy and from pre-therapy to 6-month follow-up) was examined using multiple regression models. Only those parent and child functioning variables that were significantly correlated with pre-therapy distress, guilt, or shame were included in the multiple regression model for a given parent emotion.

Preliminary Analyses

All pre-therapy variables (i.e., PSI, PSQ, CBCL, ERC) and the outcome variables (i.e., PERQdistress, PERQguilt, PER-Qshame subscales), as well as the changes in these variables from pre-therapy to post-therapy, and from pre-therapy to 6-month follow-up, were normally distributed. Analyses were conducted with and without 12 outliers included in the dataset; and since the pattern of results remained the same, all cases were retained. Assumptions of linearity, multicollinearity, and homoscedasticity were met. In order to test whether or not data were missing at random, pre-assessment total scores on the PSQ, PERQ, and PSI were compared among those who completed only the pre-assessment data collection and those who completed up to the pre-therapy, post-therapy, and follow-up data collection prior to dropping out of the study. One-way ANOVAs revealed no significant differences among the groups on all measures, indicating

Table 1 Predicting pre-therapy distress, guilt, and shame from parent and child functioning and trauma features

	Distress:					Guilt ^a :					Shame:				
	\overline{B}	SE B	β	p	sr ²	В	SE B	β	p	sr ²	\overline{B}	SE B	β	p	sr^2
1	- 0.01	0.09	02	.469	0.00	- 0.01	0.04	09	.145	0.00	0.04	0.04	.24	.164	0.01
2	0.04	0.06	.13	.255	0.01	0.03	0.03	.21	.141	0.02	0.05	0.03	.31	.033	0.04
3	0.03	0.21	.02	.438	0.00	-0.10	0.09	15	.145	0.02	-0.22	0.09	28	.010	0.06
4	0.56	0.20	.58	.004	0.11	0.28	0.09	.66	.003	0.13	0.29	0.09	.58	.001	0.11
5	-0.26	0.21	33	.110	0.02	-0.06	0.10	17	.265	0.01	-0.20	0.09	50	.016	0.05
6	-0.14	0.28	11	.332	0.00	-0.09	0.13	15	.259	0.01	-0.18	0.12	29	.074	0.02
7	-0.39	0.38	19	.155	0.02	-0.03	0.17	03	.435	0.00	0.14	0.16	.13	.198	0.01
8	1.01	0.44	.37	.013	0.08	0.15	0.20	.13	.226	0.01	0.50	0.19	.37	.006	0.07
9	-1.52	0.74	28	.046	0.06	-0.27	0.33	11	.422	0.01	-0.08	0.32	03	.808	0.00
10	0.11	2.87	.01	.971	0.00	-0.22	1.27	03	.862	0.00	-0.55	1.25	05	.663	0.00
11	6.94	3.45	.28	.051	0.06	3.25	1.53	.31	.040	0.07	4.12	1.50	.33	.009	0.08
12	- 1.38	2.92	07	.640	0.00	1.36	1.30	15	.301	0.02	- 3.41	1.27	32	.010	0.08

1. PSI-Child Domain; 2. PSI-Parent Domain; 3. PSQ-Support; 4. CBCL-Internalizing; 5. CBCL-Externalizing; 6. ERC-Lability/Negativity; 7. ERC-Emotion Regulation Skills; 8. Polyvictimization; 9. Length of time since the abuse; 10. Perpetrator-Biological/Adoptive Parent; 11. Perpetrator-Stepparent/Sibling; 12. Perpetrator-Adult/Peer Relative

that data are likely missing at random (PSQ: p = 0.98; PERQ: p = 0.20; PSI: p = 0.06).

Parent demographic differences, specifically age, gender, ethnicity, and caregiver type, were examined on PERQdistress, PERQguilt, PERQshame, when the sample size was the largest (n=92). The only significant differences were that female caregivers experienced significantly more distress and guilt prior to TF-CBT (distress: t(20.30) = 4.21, p<0.001; guilt: t(87) = 2.04, p = 0.044) and that parent age was inversely related to guilt prior to treatment (r=-0.22, p=0.042). Thus, all demographic variables were excluded from subsequent analyses, except for parent age, which was added as a covariate in analyses for parent guilt. Parent gender was not added as a covariate as nearly 90% of parents were mothers (i.e., unequal sample sizes).

Improvements in Parent Emotional Reactions to Children's Trauma

Significant improvements from pre-therapy to post-therapy were found for parent distress, with a moderate effect of TF-CBT observed for this outcome (t(47) = 3.40, p < 0.001, d = 0.49). Parents' guilt and shame also significantly improved from pre-therapy to post-therapy, with a small-to-moderate effect of TF-CBT observed (guilt: t(47) = 3.03, p < 0.002, d = 0.44; shame: t(47) = 1.88, p = 0.034, d = 0.27). From post-therapy to 6-month follow-up, there were no significant differences in parent distress, guilt, and shame (distress: t(39) = 1.33, p = 0.100, d = 0.21; guilt: t(39) = 1.68, p = 0.051, d = 0.27; shame: t(39) = 0.15, p = 0.443, d = 0.02). Significant reductions were observed in parent distress,

guilt, and shame from pre-therapy to 6-month follow-up, with a moderate-to-large effect of TF-CBT observed (distress: t(39) = 3.69, p < 0.001, d = 0.58; guilt: t(39) = 3.59, p < 0.001, d = 0.57; shame: t(39) = 1.79, p = 0.041, d = 0.28).

Correlates of Parent Emotional Reactions Prior to TF-CBT

Table 1 presents the multiple linear regression statistics for parent distress, guilt, and shame at pre-therapy. Results revealed that prior to TF-CBT, parents' distress was significantly related with parent and child functioning and with characteristics of the abuse, F(12,42)=2.36, p=0.010, with the model accounting for 40.30% of the variance in parent distress. Child internalizing symptoms and polyvictimization (i.e., a higher number of traumas) were significantly associated with more parent distress at pre-therapy and uniquely accounted for 11.36% and 7.62% of the variance in parent distress, respectively. A shorter length of time between the end of the abuse and the start of therapy was significantly associated with more parent distress before TF-CBT, and it uniquely accounted for 6.00% of the variance in pre-therapy parent distress.

While statistically controlling for parent age, parents' guilt regarding their child's trauma was significantly associated with parent and child functioning, as well as with features of the trauma experienced by the child, F(13, 40) = 2.08, p = 0.020, with 40.30% of variance explained by the model. Child internalizing symptoms and a stepparent or sibling who perpetrated the trauma, compared to a non-relative adult/peer, were significantly related to more



^aParent age was included as a covariate in the multiple regression predicting guilt.

Table 2 Predicting changes in parent distress, guilt, and shame from improvements in parent and child functioning

	Pre- to P	ost-ther	ару		Pre-therapy to Follow-up					
	\overline{B}	SE B	β	p	sr^2	\overline{B}	SE B	β	p	sr^2
Outcome: Distress										
Internalizing	0.24	0.12	.28	.029	0.08	0.17	0.15	.19	.127	0.03
Outcome: Guilt ^a										
Internalizing	0.05	0.06	.13	.190	0.02	0.07	0.06	.19	.130	0.03
Outcome: Shame										
Support	- 0.29	0.07	59	<.001	0.31	0.05	0.05	.20	.134	0.04
Parent-domain	0.01	0.02	.05	.367	0.00	0.02	0.02	.16	.188	0.02
Internalizing	-0.10	0.06	35	.038	0.07	-0.04	0.05	14	.245	0.01
Externalizing	0.06	0.07	.15	.206	0.01	0.12	0.06	.38	.034	0.10

^a Parent age was included as a covariate in the regressions predicting changes in guilt.

parent guilt before therapy, and these variables accounted for 13.25% and 6.76% of the variance in guilt, respectively.

Finally, parent and child functioning, as well as features of the abuse, were significantly related to parents' shame before TF-CBT, F(12, 42) = 4.39, p < 0.001, with the model accounting for 55.60% of the variance in this emotion. Lower support provided to the child following the abuse, parent-domain stress, child internalizing behaviours, and polyvictimization were significantly associated with greater pre-therapy shame, each uniquely accounting for 6.15%, 3.80%, 11.42%, and 7.40% of the variance in shame, respectively. Compared to a non-relative adult/peer, having had a stepparent or sibling commit the trauma was significantly associated with more shame, whereas having had an adult/ peer relative commit the abuse was significantly associated with less shame; these two variables accounted for 8.01% and 7.62% of the variance in shame, respectively. Externalizing symptoms had an inverse association with parent shame at pre-therapy and accounted for 5.15% of the variance in this emotion.

Associations of Changes in Parent Emotional Reactions with Improvements in Parent and Child Functioning

Improvement in parents' emotional reactions and in parent and child functioning was operationally defined as lower scores at post-therapy and at follow-up than at pre-therapy. Improvement from pre-to-post-therapy was measured by subtracting post-therapy scores from pre-therapy scores. Improvement from pre-therapy to 6-month follow-up was measured by subtracting follow-up scores from pre-therapy scores for the same variables. Positive difference scores indicated a move toward less distress, guilt, and shame at post-therapy and follow-up, as well as an improvement in parent and child functioning at these two time-points. For parent support and child emotion regulation, positive differences scores indicated a decline in these two indices over time. A

one-tailed test was used because we proposed a directional hypothesis, that decreased parent stress, child internalizing and externalizing symptoms, lability/negativity, as well as increased parent support and child emotion regulation, would be significantly associated with improvements in parents' distress, guilt, and shame.

Pre-therapy to Post-Therapy

See Table 2 for model statistics. Improvements in child internalizing behaviours from pre-therapy to post-therapy was significantly related to decreases in parent distress over the same time period, and it accounted for 8.00% percent of the variance in changes in parent distress, F(1, 44) = 3.83, p = 0.029. While statistically controlling for age, changes in internalizing behaviours from pre-therapy to post-therapy was not associated with changes in parent guilt over the same time period; 4.70% of the variance in changes in guilt was accounted for in this model, F(2, 43) = 1.05, p = 0.179. Finally, decreased parent support from pre-therapy to posttherapy was significantly associated with increases in parent shame over the same time period, and it uniquely accounted for 31.36% of the variance in changes in parent shame. Also, improvements in child internalizing behaviours was significantly associated with increased shame, and it uniquely accounted for 6.66% of the variance in improvements in parent shame. This model accounted for 32.70% of the variance in changes in shame, F(4, 34) = 4.12, p = 0.004.

Pre-Therapy to Follow-Up

Changes in child internalizing symptoms from pre-therapy to 6-month follow-up did not significantly relate to changes in parent distress over the same time period, with only 3.50% of the variance accounted for by the model, F(1, 37) = 1.35, p = 0.127. Changes in child internalizing symptoms did not significantly relate to changes in parent guilt from pre-therapy to follow-up, with only 4.20% of the variance accounted



for while controlling for parent age, F(2, 36) = 0.79, p = 0.231. Finally, only improvements in child externalizing symptoms from pre-therapy to follow-up was significantly associated with decreases in parent shame over the same time period, and it uniquely accounted for 10.43% of the variance in improvements. The entire model accounted for 15.70% of the variance, F(4, 29) = 1.36, p = 0.137.

Discussion

The current study suggests that TF-CBT improves parents' discrete negative emotional reactions to their child's trauma throughout treatment and months after treatment has ended, with a generally moderate effect of TF-CBT on these improvements. The lack of significant changes in all parent emotional reactions from post-therapy to follow-up suggests that the improvements made from pre-therapy to post-therapy were maintained after therapy ended. It is promising that the current results are consistent with other research that has examined changes in parents' emotional reactions to trauma over the course of therapy (e.g., Holt et al., 2014a, 2015). To our knowledge, our investigation is the first to demonstrate the effectiveness of TF-CBT in improving parents' distress, guilt, and shame towards young children's victimization. We provide some ideas of the TF-CBT components and mechanisms that may have brought about these changes in parents' emotional reactions.

TF-CBT includes family involvement as one of its core elements (Cohen et al., 2017). During individual parent sessions, therapists provide a safe atmosphere for parents to share a range of emotions, including feelings of distress, shame, and guilt, as well as the less socially desirable feelings that parents may have to blame, as opposed to support, their child in the aftermath of the trauma. The therapist validates these feelings and takes time to learn about how parents manage these difficult emotions, which reveals clues about their coping strengths, as well as coping weaknesses that can be addressed during individual parent sessions. The improvements in parents' discrete emotional reactions suggests that parents may be developing affective expression and modulation skills (e.g., emotion recognition and regulation through positive imagery, relaxation techniques, and self-talk) and cognitive coping skills (e.g., identifying problematic automatic thoughts and considering alternative thoughts) to manage their distress, guilt, shame, stress, and feelings of blame—skills that allow parents to be more effective models of coping for their children (Cohen et al., 2017). The individual parent sessions also enable the therapist to help parents practice appropriate responses to potentially shocking or difficult information in the child's trauma narrative. As the child shares his/her trauma narrative and discusses the knowledge and skills they have acquired in therapy during the joint child-parent sessions, the therapist reviews psychoeducation (e.g., dispelling trauma myths) and relaxation techniques taught in individual sessions with parents and children (Cohen et al., 2017). Taken together, it is possible that both parent sessions and joint child-parent sessions are pertinent components of TF-CBT that improve parent guilt, shame, and distress, as well as concomitant parent and child functioning.

Notably, the changes in parents' distress, guilt, and shame underscore that TF-CBT is effective at reducing parents' negative emotions to their child's trauma—even when the TF-CBT model is not designed to address these specific parent concerns after child trauma. Rather, the model is developed for children whose primary presenting problems are related to their traumatic life experiences, such as PTSD, depression, anxiety, or behavioural problems that clearly emerged secondary to the traumatic event(s) they experienced (Cohen et al., 2017). Parent sessions are dedicated to supporting parents in relation to their child's trauma experience(s) and psychological difficulties (e.g., optimizing parenting skills). As such, the moderate effects in the current study highlight the potential for TF-CBT and other trauma-informed models of care to integrate components of therapy that focus on the parents themselves. Cyr and colleagues (2013) identified four types of maternal emotional reactions (e.g., resilient, avoidant-coping, traumatized, and anger-oriented), with each subgroup differing in their ability to support the child, manage hostile feelings towards the child, and implement appropriate parenting strategies. These authors posit that it is possible that certain parent emotions more strongly relate to child's posttraumatic symptoms than others (Cyr et al., 2013). Other parent factors, such as the history of psychiatric disorder or the presence of parental posttraumatic stress disorder, can deter children's resilience following trauma exposure (reviewed in Pine & Cohen, 2002). Together, this suggests that additional aspects of trauma-focused treatment that target parents' own functioning may not only have a larger effect on their emotional reactions, but also aid children's recovery following trauma exposure. It is unknown how many parents in the current study had their own trauma history and if they would have benefited from additional therapeutic support that builds on what is offered through the TF-CBT model. Nevertheless, the results of the current study underscore the areas in which TF-CBT may be further developed, so as to help clinicians collaboratively work with parents on their own psychological difficulties or, if appropriate, refer them for individual therapy to process their own trauma.

Prior to therapy, child internalizing symptoms was a consistent and robust predictor of more parent distress, guilt, and shame. However, there were also factors of parent and child functioning and trauma characteristics that were only associated with certain parent emotions prior to treatment



(i.e., length of time since the abuse for distress; polyvictimization for distress and shame; stepparent/sibling perpetrator for guilt and shame; parent support, parent stress, adult/peer relative perpetrator, and child externalizing symptoms for shame). These results highlight that parent distress, guilt, and shame reactions to a young child's trauma are discrete emotional experiences with different underlying correlates. Further, the results could additionally inform what TF-CBT component(s) clinicians can use with parents who endorse certain emotions more strongly than others in order to meet the individual needs of each parent.

The finding that child externalizing symptoms was associated with less parent shame at the start of TF-CBT, as well as the finding that improvements in child internalizing symptoms was related with increased shame from pre-topost-therapy, were both unexpected, as we hypothesized that poor child functioning would be associated with more severe parent emotional reactions and that improvements in child functioning would be associated with improvements in parent emotional reactions. However, it is worth highlighting that externalizing symptoms are comprised of behaviours that are more visible to parents (e.g., aggression, rule-breaking, defiance) than internalizing symptoms (e.g., Hawley & Weisz, 2003). Thus, in light of these visible behaviours and the dyadic nature of TF-CBT, it is possible that parents within the current study felt less shameful prior to therapy and, instead, more justified or determined to ensure that their child received help to process the trauma experienced. Moreover, as children became less anxious and withdrawn (i.e., less internalizing behaviours) and, instead, more vocal about their trauma towards the end of therapy, parents may, naturally, experience enhanced feelings of shame in response to the conjoint discussion and processing of abuse. However, these feelings of shame may subside as parents' supporting behaviours (learned in individual sessions and practiced in conjoint sessions and outside of therapy) increase, as evident by the robust association between improvements in parent support and shame from pre-to-post therapy. As such, it is possible that a third variable(s) is driving the negative association between child externalizing difficulties and parents' shame prior to treatment, as well as the negative association between improvements in child internalizing difficulties and parent shame between pre-and-post therapy, that warrants further examination.

Finally, analyses in the current study revealed that changes in child internalizing and externalizing symptoms, as well as parent support, were the most robust predictors of changes in parents' distress and shame, thereby highlighting possible mechanisms of change in parents' negative reactions to their child's trauma that should be further examined in future research. Previous research suggests that parents' cognitive-emotional processing in TF-CBT (i.e., approaching trauma-related material, constructively

making meaning of it, and shifting one's perspective and emotional response) is associated with reductions in child internalizing and externalizing symptoms over the course of treatment (Yasinski et al., 2016). While further research is needed to better explain this association, these findings highlight the importance of considering caregiver processing—an important mechanism of change in the treatment of adult psychopathology (Foa et al., 2006)—in the context of youth treatment.

Limitations and Future Directions

A structural limitation of the current study is the attrition rate and sample size. Prior studies examining the efficacy of TF-CBT suggest that attrition remains a concern, reporting rates ranging from 33 to 77% (e.g., Wamser-Nanney & Steinzor, 2016). Trauma-exposed children and their parents may experience ambivalence about treatment and avoidance about processing trauma-related content (Wamser-Nanney & Steinzor, 2016), which may lead to premature termination of treatment and attrition. This, in turn, introduces selection biases. In the current study, the attrition rate was 44.57% from pre-therapy to post-therapy and 56.52% from pre-therapy to 6-month follow-up. Relatedly, smaller sample sizes reduce statistical power, which may impact the ability to detect significant relationships. Despite a modest sample size at post-therapy and follow-up, the results of the current study are sufficiently powered and meaningful. Sufficient power to detect the effects from pre-therapy to posttherapy and from pre-therapy to follow-up for parental distress and guilt was achieved, but statistical power was less than 0.80 for parental shame. Future research should examine parental shame with a larger sample.

All variables were assessed based on only parents' selfreport that were completed retrospectively, leaving room for a possible social desirability reporting bias. The current study did not assess the child's perspective of his/her functioning and of parents' support and emotional reactions, and thus, discordance of ratings could not be determined. Research that involves the use of observational methods (i.e., coding parents' in-session behaviours, such as support or blame) and informant-report from those who know the parent and child well (e.g., the treatment provider) would strengthen suggestions pertaining to the relationships of parent and child functioning with parents' negative affect, as well as suggestions pertaining to how improvements in functioning relate to improvements in parents' negative affect. Thorough clinical interviewing to assess parent and child functioning would additionally be useful to identify biased responding.



Although there was a significant associations between improvements in specific parent and child functioning variables and improvements in parent distress, guilt, and shame, it is not possible to determine a causal relationship between these variables since the improvements occurred over the same time periods. The results may suggest that parents and children get better across multiple domains concurrently. It is also possible that there is a third variable driving the association between changes in parent and child functioning and changes in parent distress, guilt, and shame. Additionally, the lack of a control group precludes definitive causal conclusions about the unique effect of TF-CBT on improvements in parents' emotional reactions to trauma. As there was no temporal order of variables, it is possible that observed associations could also occur naturally outside the context of treatment and may have been influenced by factors unrelated to treatment. Future research examining similar variables in TF-CBT and control groups within a randomized control trial could better address these concerns.

To enhance our understanding of parents' emotional reactions to their child's trauma, it is important to acknowledge the abuse histories of parents themselves. Some of the parents involved in treatment reported experiencing domestic violence (n = 29). However, it is not known if parents had their own trauma history outside of domestic violence victimization. As greater parental PTSD symptoms predicts more negative child outcomes following trauma exposure (e.g., Pine & Cohen, 2002), this too would influence parents' emotional reactions throughout the course of treatment. When the non-offending parent has their own trauma history, trauma symptoms may resurface after learning of their children's trauma experience and may make it difficult for them to respond sensitively and consistently to their children's emotional needs. Future research should consider the independent or moderating role of parent trauma in the severity of and changes in parents' adverse emotional reactions to their child's experiences in TF-CBT. Additionally, it is important to note that caregivers in the current study were primarily women, and therefore, the findings may not generalize to male caregivers. Future studies could examine whether the observed results differ by parent gender and could compare same-gender and cross-gender child-caregiver dyads. Finally, of the 92 child-parent dyads, 64 reported that there was a sibling(s) living at home. It is possible that other children in the household may have been exposed to the trauma, which may also predict parents' emotions and attenuate changes in these emotions. Future research should examine the predictive or moderating role of sibling exposure to trauma in the severity of or changes in parents' emotions throughout TF-CBT.

Conclusion

Parents experience complex and differentiated emotions after learning of their child's abuse. This results of this study demonstrate that TF-CBT improved parents' distress, guilt, and shame over the course of treatment, as well as highlight the unique correlates of these emotional reactions before treatment, and the unique correlates of changes in these reactions. These results highlight the areas in which TF-CBT may be further developed, such that clinicians can work incisively and collaboratively with parents who are in need of emotional support after their child has experienced trauma.

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