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# FACTORS INFLUENCING LEVELS OF SECONDARY TRAUMATIC STRESS IN NON-OFFENDING CAREGIVERS OF CHILDREN WITH SEXUAL OR PHYSICAL ABUSE HISTORIES

by

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#### A Dissertation

Submitted to the Graduate Faculty

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Doctor of Philosophy

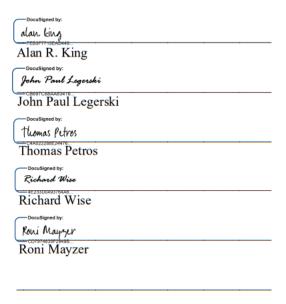
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This document, submitted in partial fulfillment of the requirements for the degree from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.



This document is being submitted by the appointed advisory committee as having met all the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

Chris Nelson
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#### **PERMISSION**

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Caregivers of Children With Sexual or Physical Abuse Histories

Department Clinical Psychology

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Ani C. Mangold 6/7/2022

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#### **Abstract**

The present study examined factors influencing levels of secondary traumatic stress (STS) in non-offending caregivers (NOCs) of children with histories of sexual or physical abuse. These factors included the nature of the abuse, NOCs' relationships with the initiators of the abuse, children's ages and genders, NOCs' genders, NOCs' personal trauma histories, familial structures, and the elapsed time between children's disclosures of abuse and their trauma assessments. As a secondary objective, the present study examined the interactions between children's self-reports of their own posttraumatic stress disorder (PTSD) symptomatology, NOCs' estimates of their children's PTSD symptomatology, and NOCs' self-reports of their own STS symptomatology. Participants from a clinical sample (N=150; child age M=9.89, SD=4.08) completed the PTSD Checklist for the DSM-5 (PCL-5) and the Child PTSD Symptom Scale (CPSS, Child-Report and NOC-Report). Analytic strategies included point-biserial correlation coefficient calculations, linear regression analyses, and Analyses of Covariance (ANCOVAs). The present study found that NOCs experience STS following their children's disclosures of abuse, irrespective of the nature of the abuse, their children's ages, and their children's genders. NOCs' levels of STS were unaffected by whether their own genders were congruous or incongruous with their children's genders. The present study also found that NOCs' levels of STS were impacted by their relationships with the initiators of the abuse, personal trauma histories, and familial structures. NOCs' self-reported STS symptomatology mirrored their estimates of their children's PTSD symptomatology. The discrepancy ratios between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD

symptomatology were impacted by children's ages and genders. The impact of STS on NOCs deserves additional attention in the child traumatology literature and warrants careful consideration in clinical settings. Clinical practitioners should note the importance of examining children's self-reports of their own PTSD symptomatology, NOCs' estimates of their children's PTSD symptomatology, and NOCs' self-reports of their own STS symptomatology concurrently when making recommendations for trauma-informed evidence-based treatments.

#### Introduction

Approximately two-thirds (61.8%) of children in the United States have experienced a potentially traumatic event (PTE), and approximately one-third (32.7%) of those children have experienced multiple PTEs (McLaughlin et al., 2013). Non-offending caregivers (NOCs) of children who have experienced one or more PTEs must process the disclosures of the PTEs and cope with the physical, emotional, and behavioral changes in their children that often follow. In turn, NOCs may develop *secondary traumatic stress* (STS; Arzi, Solomon, & Dekel, 2000; Banyard, Rozelle, & Englund, 2001; Barnes, 1998; Eriksson, Kemp, Gorsuch, Hoke, & Foy, 2001; Figley, 1983; Figley, 1995; Goff & Smith, 2005; Landolt, Vollrath, Ribi, Gnehm, & Sennhauser, 2003; Lind, 2000; Lugris, 2000; McCann & Pearlman, 1990; Solomon et al., 1992).

Previous literature has referred to STS by multiple names (e.g., secondary victimization, contact victimization, compassion fatigue, compassion burnout, and vicarious trauma) and has defined STS in numerous ways (Lugris, 2000). For the purposes of the present study, STS is defined as a set of psychological symptoms that mimic posttraumatic stress disorder (PTSD; Baird & Kracen, 2006; Bramsen, van der Ploeg, & Twisk, 2002; Coughlan & Parkin, 1987; Nelson & Wright, 1996) that are derived from NOCs being indirectly exposed to PTEs through their children's explicit accounts of the PTEs (Lind, 2000; Lugris, 2000; Pearlman & MacIan, 1995).

Learning theory may explain the development of STS in NOCs. Mowrer's two-factor theory (1947) of operant and classical conditioning may explain why NOCs experience high levels of distress and fear after their children's disclosures of abuse. Because memories of the

PTEs and conditioned stimuli likely elicit conditioned emotional responses, NOCs may avoid the conditioned stimuli and experience a reduction in conditioned emotional responses. In other words, avoidance of the conditioned stimuli is negatively reinforced, which perpetuates the connection between the conditioned stimuli and the conditioned emotional responses.

Although learning theory partially accounts for the onset and maintenance of Avoidance symptomatology in NOCs, it does not fully explain Intrusion symptomatology. Chemtob, Roitblat, Hamada, Carlson, and Twentyman (1988) proposed that fear networks in the brain are always "at least weakly activated" in individuals experiencing traumatic stress symptomatology. These fear networks may guide NOCs' interpretations of events as potentially dangerous. When fear networks are activated by reminders of PTEs, the information in the fear network may enter NOCs' consciousness in the form of Intrusion symptomatology.

Cognitive theories may explain the effect of PTEs on NOCs' belief systems. Horowitz (1986) proposed that individuals have a psychological need for new, incompatible information to be integrated with existing beliefs. This keeps the PTEs in NOCs' active memories until processing is complete and the PTEs are resolved. Horowitz (1986) also theorized that a conflict exists between individuals' needs to incorporate PTEs into their personal histories and their avoidance of emotional pain. When images of PTEs, thoughts about the meanings of PTEs, and emotions associated with PTEs become overwhelming, individuals' psychological defense mechanisms take over. At this time individuals exhibit Avoidance symptomatology, namely numbing. According to this theory, chronic traumatic stress symptomatology occurs because

PTEs remain in NOCs' active memories without becoming fully integrated. Therefore, PTEs are still able to stimulate Intrusion and Avoidant symptomatology in NOCs.

NOCs' Negative Alterations in Cognitions and Mood and Alterations in Arousal and Reactivity symptomatology may also have neurological underpinnings. NOCs may possess reactive amygdalas. The amygdala is the part of the brain that detects threats in the environment. When the amygdala is activated, it communicates with the insula—the area of the brain associated with introspection and emotional awareness. The amygdala-insula circuit can suppress the medial prefrontal cortex—the area of the brain that assigns meaning to events and regulates emotions. Suppression of the medial prefrontal cortex may interfere with NOCs' abilities to regulate their negative emotions and assign positive meanings to events (Southwick, Davis, Aikins, Rasmusson, Barron, & Morgon, 2007). Reactive amygdalas make NOCs alert and prepared to act should they face a threat, which may lead them to be more impulsive. The orbital prefrontal cortex is responsible for inhibiting motor behavior when it is unnecessary or inappropriate. In some NOCs with STS symptomatology, the orbital prefrontal cortex may decrease in volume and become less activated. This means that NOCs have less control over their reactive anger when they are emotionally triggered. The amygdala also activates the sympathetic nervous system when it detects a threat. At this time the amygdala releases norepinephrine, which is not well regulated by the prefrontal cortex. Increased norepinephrine in the prefrontal cortex leads to hyperarousal, hypervigilance, and sleep disruption. As a result of hyperarousal, hypervigilance, and sleep disruption, NOCs may become emotionally triggered by

anything that resembles the PTE (Southwick et al., 2007).

PTSD, and consequently STS, are associated with significant economic costs and high levels of medical expenditures and social, occupational, and physical disabilities (Arnow et al. 2000; Kartha et al. 2008; Kessler et al. 2005a). Adults experiencing traumatic stress symptomatology also exhibit impaired functioning in educational, occupational, social, interpersonal, and physical health domains. Other research associates clinically significant traumatic stress symptomatology with lower educational success, increased absences from work, lower income, and poorer family relationships (Olatunji et al. 2007; Sayer et al. 2011; Schnurr et al. 2009).

NOCs are able to provide vital support to their children during disclosures and in subsequent treatment (Barker-Collo & Read, 2003; Cohen & Mannarino, 2008; Kouyoumdjian et al., 2005; Lipton, 1997; Plummer, 2006; Saywitz et al., 2000). Several studies reviewed by Elliott and Carnes (2001) have shown that the responses from NOCs can mediate levels of distress and traumatic stress symptomatology in children with histories of sexual abuse. Higher overall levels of support from NOCs are associated with better adjustment in children following disclosures of sexual abuse (Breslau, 2009; Elliott and Carnes, 2001; Kendall-Tackett et al., 1993; Lovett, 2004; Vogt et al., 2007). NOCs' support also plays an essential role in assisting children throughout investigative processes (Davies & Seymour, 1999). Clinical evidence indicates that traumatic stress symptomatology can negatively impact NOCs' functioning, ability to parent effectively, and ability to be sensitive to their children's needs. Because a lack of caregiver care, support, nurturing, and affection are associated with increased traumatic stress

symptomatology in children (Lipton, 1997; Lynsky and Fergusson, 1997), it is imperative that NOCs who are exhibiting STS receive their own treatment.

Trauma-informed evidence-based treatments that integrate NOCs, such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006), the Child and Family Traumatic Stress Intervention (CFTSI; Berkowitz, Stover, & Marans, 2011), and Parent Child Interaction Therapy (PCIT; Hembree-Kigin & McNeil, 2013) are available to children who have experienced one or more PTEs and their NOCs (Tavkar & Hansen, 2011). However, NOCs are rarely referred for their own services because they are often perceived by clinical practitioners as being only "indirectly affected" by the PTEs their children experienced (Barnes, 1998; Brady, Guy, Poelstra, & Brokaw, 1999; Motta, Joseph, Rose, Suozzi, & Leiderman, 1997).

Despite this, some research has examined the trauma response patterns of caregivers of children with trauma histories. Most of this research, however, focuses on caregivers of adults who have survived war (Dirkzwager, Bramsen, Ader, & van der Ploeg, 2005) or unwanted sexual experiences (Emm & McKenry, 1988; Feinauer, 1982; Mio & Foster, 1991). Further, research on STS stemming from indirect exposure to PTEs experienced by children often focuses on adult professionals who work with children following PTEs. These adult professionals include police officers (Powell, Guadagno, & Cassematis, 2013), social workers (Anne Dombo & Whiting Blome, 2016; Baugerud, Vangbæk, & Melinder, 2017; Dagan, Ben-Porat, & Itzhaky, 2016; Harker, Pidgeon, & Klaasen, 2016), forensic interviewers (Perron & Hiltz, 2006), medical professionals (Berger, Polivka, Smoot, & Owens, 2015; Hubbard, Beeber, & Eves, 2017;

Măirean & Turliuc, 2013; Zerach & Shalev, 2015), mental health professionals (Baum, 2016; Canfield, 2005; Figley, 2013; Finklestein, Stein, Green, Bronstein, & Soloman, 2015; Hensel, Ruiz, Finney, & Dewa, 2015), and trauma researchers (Shannonhouse, Barden, Jones, Gonzalez, & Murphy, 2016).

The limited research regarding STS levels in NOCs of children with trauma histories has focused on NOC age (Adams, Matto, & Harrington, 2001; Resick, 2000), gender (Corcoran, 2004), level of education (Resick, 2000), socio-economic status (Resick, 2000), style of coping (Shalev & Ursano, 2003), and previous psychological well-being (Brewin, Andrews, & Valentine, 2000; Resick, 2000) as mediators of STS (Lerias & Byrne, 2003). Consideration has also been given to the NOCs' levels of empathy for their children (Cerney, 1995; Maloney, 1988; Rosenheck & Nathan, 1985) and attachment styles (Bowlby, 1969; Johnson, 2002; Sheinberg & Graenkel, 2001) as mediators of STS. The purpose of the present study was to identify factors influencing levels of STS in NOCs of children with histories of sexual or physical abuse (i.e., the nature of the abuse, NOCs' relationships with the initiators of the abuse, children's ages and genders, NOCs' genders, NOCs' trauma histories, familial structures, and the elapsed time between children's disclosures of abuse and their trauma assessments). As a secondary objective, the present study examined the interactions between children's self-reports of their own PTSD symptomatology, NOCs' estimates of their children's PTSD symptomatology, and NOCs' self-reports of their own STS symptomatology.

Factors Influencing Levels of Secondary Traumatic Stress in Non-Offending Caregivers

Children's Disclosures of Sexual Abuse.

In 2015, children's advocacy centers around the United States served more than 311,000 victims of child abuse. Approximately two-thirds of these children disclosed experiencing sexual abuse (205,438; National Statistics on Child Abuse, 2015). The disclosure of sexual abuse is often a highly stressful and disruptive experience for NOCs of sexually abused children. Quite often there are "costs" associated with disclosures of sexual abuse. These costs may include changes in employment or income; changes in relationships with family, friends, and the initiators of the abuse; dependence on government programs; and changes in residence (Massat & Lundy, 1998). Therefore, it is not surprising that considerable evidence demonstrates that NOCs of sexually abused children experience significant distress following their children's disclosures of sexual abuse (Davies, 1995; Deblinger, Hathaway, Lippmann, & Steer, 1993; Deblinger, Steer, & Lippmann, 1999; Elliott & Carnes, 2001; Fuller, 2016; Kelley, 1990; Knott & Fabre, 2014; McCourt, Peel, & O'Carroll, 1998; Myrick & Green, 2013; Newberger, Gremy, Waternaux, & Newberger, 1993; Runyon, Spandorfer, & Schoeder, 2014; Trickett et al., 2011; van Toledo & Seymour, 2013). Children's disclosures of sexual abuse may also pose serious mental health risks to their NOCs (Tavkar & Hansen, 2011). Multiple empirical studies (Burgess, Hartman, Kelley, Grant, & Gray, 1990; Davies, 1995; Kelley, 1990) have documented clinically elevated trauma symptomatology in NOCs following their children's disclosures of sexual abuse.

Children's Disclosures of Physical Abuse.

Of the children served at children's advocacy centers in the United States in 2015, approximately 20% disclosed experiencing physical abuse (60,897; National Statistics on Child Abuse, 2015). Traumatology literature clearly demonstrates that physically abused children exhibit signs of psychological trauma (Adam, Everett, & O'Neal, 1992; Deblinger, McLeer, Atkins, Ralphe, & Foa, 1989; Dubner & Motta, 1999; Famularo, Fenton, Augustyn, & Zuckerman, 1996; Lipovsky, 1991). It has been postulated that NOCs of physically abused children are at-risk for developing STS (Barnes, 1998). However, there is a paucity of research that exclusively examines NOCs' adjustment following disclosures of physical abuse (Cabbigat & Kangas, 2017). The present study examined whether levels of STS in NOCs were more highly elevated when their children disclosed experiencing sexual abuse as opposed to physical abuse. *Non-Offending Caregivers' Relationships with the Initiators of Abuse*.

Of the children served at children's advocacy centers around the United States in 2015, 39% reported being abused by biological caregivers, 51% reported being abused by biological family members, and 10% reported being abused by known people outside of their biological families (National Statistics on Child Abuse, 2015). Multiple studies have examined how likely NOCs are to believe their children's allegations of abuse based on their relationships with the initiators of the abuse. Lyon and Kouloumpos-Lenares (1987) found that mothers were more likely to believe their children's allegations of abuse when the initiators were not family members. Further, Conte and Berliner (1981) reported that following disclosures of sexual abuse, 85% of mothers took immediate action when the initiators of abuse were not family members,

while only 60% of mothers took immediate action when the initiators of abuse were family members. Sirles and Franke (1989) found that mothers were more likely to believe allegations of abuse that involved former partners (including their children's biological fathers) or extended family members than allegations of abuse involving step-fathers or live-in partners. Non-offending mothers have also been found to be less supportive of their children when the initiators of the abuse were their romantic partners (Everson, Hunter, Runyon, Edelsohn, & Coulter, 1989; Faller, 1988; Pintello & Zuravin, 2001). The more seriously the abuse allegations affect mothers' lifestyles and overall sense of self, the less likely mothers are to believe allegations of abuse (Elliot & Briere, 1994; Gomes-Schwartz, Horowitz, & Cardarelli, 1990; Lawson & Chaffin, 1992; Sirles & Franke, 1989). Mothers also have more difficulty believing allegations against current partners when they have new, intense feelings for their partners or rely on their partners financially (Elliot & Briere, 1994; Everson et al., 1989; Faller, 1984; Gomes-Schwartz et al., 1990; Leifer et al., 2001; Sirles & Franke, 1989).

Emotional reactions to children's allegations of abuse also vary depending on the NOCs' relationships with the initiators of the abuse. Ullman (2007) found that feelings of disbelief were stronger in NOCs whose children were abused by relatives than those whose children were abused by acquaintances or strangers. Many NOCs also reported feeling "malice" toward the people that disrupted and negatively affected their children's lives. This malice was often heightened when the initiators of the abuse were trusted friends, partners, or other family members due to feelings of betrayal (Freyd, 1996; Grosz, Kempe, & Kelly, 2000). Several NOCs also reported fears about seeing the initiators of the abuse again (McCourt et al., 1998). The

notion that most initiators are known to their victims intensifies this fear for many NOCs and can result in increased social withdrawal (Brestan & Payne, 2004; Gutner, Rizvi, Monson, & Resick, 2006). Regarding symptoms of STS, Manion and colleagues (1996) found that when the initiators of the abuse were outside of children's immediate families, non-offending mothers experienced high Intrusion and Avoidance symptoms of PTSD following their children's disclosures of abuse. The present study examined whether levels of STS in NOCs were more highly elevated when the initiators of the abuse were romantic partners as opposed to other known people.

Children's Ages.

Studies examining how likely NOCs are to believe and support their children following disclosures of abuse have yielded varying results based on the ages of the children at the time of their disclosures (Elliott & Carnes, 2001). Both Lyon and Kouloumpos-Lenares (1987) and Sirles and Franke (1989) found that non-offending mothers believed their children's disclosures of abuse regardless of their children's ages. However, non-offending mothers of preschool-aged children readily believed their children, whereas non-offending mothers of adolescents demonstrated more hesitance. Pintello and Zuravin (2001) found that younger children were more likely to be believed by their NOCs than older children. Lipton (1997) found that older children received lower levels of support from their NOCs. While no known research has examined levels of STS in NOCs based on the ages of their children, Salt, Myer, Coleman, and Sauzier (1990) found that NOCs exhibited greater concern and protective behavior toward younger children following disclosures of sexual abuse.

Several factors may explain why NOCs are more likely to believe and support younger children after disclosures of sexual abuse. Younger children lack sexual experience and the ability to make up details about sexual exploitation. Younger children are also more attached to their caregivers, which may consequently increase the likelihood of caregivers' willingness to believe their disclosures of sexual abuse. Conversely, teenagers may possess sexual information that would enable them to falsify an allegation of sexual abuse and are also less attached to their caregivers. This consequently decreases the likelihood of caregivers' believing their disclosures of abuse (Sirles and Franke, 1989).

The present study examined whether levels of STS in NOCs were more highly elevated when their children were in preschool or elementary school (ages 3 to 10) as opposed to middle school or high school (ages 11 to 18) at the time of their disclosures.

#### Children's Genders.

Studies examining how likely NOCs are to believe and support their children following disclosures of abuse have yielded varying results based on children's genders (Elliott & Carnes, 2001). Some studies have found that NOCs were more likely to believe (Pintello & Zuravin, 2001), protect (Salt et al., 1990) and help (Lyon & Koulompos-Lenares, 1987) male children as opposed to female children. Another retrospective study, however, found that mothers were perceived as being supportive following disclosures of abuse by both male and female children (Stroud, 1999). The results of these studies do not discuss why male children are more likely to be believed, protected, and helped by their non-offending caregivers than female children. This is because the studies did not find significant results in subsequent analyses (Pintello & Zuravin,

2001), only presented statistics (Lyon & Koulompos-Lenares, 1987; Salt et al., 1990), or were retrospective in nature. The present study employed exploratory analyses to determine whether levels of STS in NOCs were more highly elevated when their children were male as opposed to female.

Non-Offending Caregivers' Genders.

There is a paucity of research examining how likely NOCs are to believe and support their children following disclosures of abuse based on their own genders. In a retrospective study, Stroud (1999) found that non-offending fathers were perceived as less supportive by male children. Non-offending mothers, on the other hand, were perceived as supportive by both male and female children. The present study employed exploratory analyses to determine whether levels of STS in NOCs were more highly elevated when their genders were congruous as opposed to incongruous with their children's genders.

Non-Offending Caregivers' Personal Trauma Histories.

A multitude of researchers have reported that maternal responses to disclosures of sexual abuse are not associated with their own childhood trauma histories (Deblinger, Stauffer, & Landsberg, 1994; De Jong, 1988; Heriot, 1996; Hubbard, 1989; Leifer et al., 2001; Salt et al., 1990). Be that as it may, other research has indicated that an individual's trauma history may often affect their current levels of distress beyond what is accounted for by a current stressor (Ensel & Lin, 1998). Moreover, research has also found that having a trauma history is an indicator of posttraumatic stress even when individuals only experience a traumatic event vicariously (Marmar et al., 1996; Resick, 2000; Rosenthal, 2000; Son, Singer, & Anglin, 1998;

Van der Kolk, McFarlane, & Weisaeth, 1996). Individuals with trauma histories may find it difficult to adjust to a recent critical incident if they are having recurrent, distressing memories of traumatic events they experienced in the past (Adams et al., 2001; Brady et al., 1999; Pearlman & MacIan, 1995). Additional research has also found that posttraumatic stress is especially significant for individuals with childhood trauma histories. Such individuals have been found to have more severe anxiety symptoms than those without negative childhood experiences as a result of exposure to potentially traumatic events (Brewin et al., 2000; Pierce, 2000; Resick, 2000). The present study examined whether levels of STS in NOCs were more highly elevated when NOCs had trauma histories congruous with their children's trauma histories as opposed to incongruous trauma histories (e.g., differing childhood trauma history or experiencing a potentially traumatic event as an adult) or no trauma histories.

#### Familial Structures.

The effect of abuse disclosures on biological NOCs' well-being and psychological adjustment has been thoroughly documented in the traumatology literature. However, less is known about kinship and foster NOCs' reactions to disclosures of sexual and physical abuse. Virtually all children in kinship and foster care have been exposed to abuse and neglect (Forkey, Garner, Nalven, Schilling, & Stirling, 2015), and at least 90% of children who enter foster care have experienced a potentially traumatic event (PTE; Burwell, 2013). Given these high prevalence rates, it is highly likely that kinship and foster NOCs will find themselves in a position wherein they live with and care for children who have experienced at least one PTE. Kinship and foster NOCs may also be indirectly exposed to PTEs through their children's

explicit accounts of the PTEs. They may also witness the physical and psychological impacts of the PTEs on the children in their care (Carew, 2016) and develop STS.

There is a paucity of research regarding the reactions of kinship and foster NOCs to disclosures of physical abuse. However, research examining the reactions of foster NOCs to disclosures of sexual abuse has yielded mixed results. After controlling for age, education level, personal trauma history, external stressors, perceived support, time as a caregiver, annual hours of training, number of children in the household, and experience caring for sexually abused children, McLain (2008) found that non-biological caregivers of sexually abused children experience low levels of compassion fatigue. Conversely, Lipton (1997) found that while foster NOCs do experience distress following disclosures of sexual abuse, they experience significantly less distress than biological NOCs following disclosures of sexual abuse. The present study examined whether levels of STS significantly differed between biological NOCs and kinship and foster NOCs.

Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments.

There is a paucity of research examining levels of STS in NOCs while considering the elapsed time between their children's disclosures of abuse and trauma assessments. Further, studies examining NOCs' levels of belief and support following disclosures of abuse are often fraught with methodological difficulties because belief and support are not static constructs (Elliott & Carnes, 2001). Evidence also suggests that NOCs' initial reactions are not always accurate predictors of their ability to believe and support their children at different points in the future (Salt et al., 1990). Given this evidence, it is possible that NOCs' levels of STS may vary

based on the elapsed time between their children's disclosures of abuse and trauma assessments.

To account for this, the present study included the elapsed time between children's disclosures of abuse and trauma assessments as a covariate in all statistical analyses.

Relationships between Estimated and Self-Reported Traumatic Stress Symptomatology.

Several studies have found variable relationships between children's self-reported distress and NOCs' self-reported distress (Elliott & Carnes, 2001). In a study of incestuous abuse initiated by biological fathers, Hanson, Saunders, and Lipovsky (1992) found that self-reported levels of distress experienced by non-offending mothers were significantly related to the victim's self-reported anxiety. Further, non-offending maternal distress was significantly related to the victims' self-reported fears.

Clinical observations and empirical research regarding the association of children's posttraumatic stress disorder (PTSD) symptomatology with their NOCs' PTSD symptomatology have yielded mixed results. Some researchers have found no relationship between children and NOCs' PTSD symptomatology (Landolt et al., 2003). Other studies have documented concordant PTSD symptomatology in children and NOCs that were exposed to the same trauma (Barakat et al., 1997; Daviss et al., 2000; De Vries et al., 1999; Kassam-Adams et al., 2006).

One study wherein NOCs predicted their children's PTSD symptomatology found that caregivers' reports of their children's PTSD symptomatology were poorly correlated with their children's self-reported PTSD symptomatology. Instead NOCs' estimates were driven by their own traumatic reactions and symptoms (Valentino, Berkowitz, & Stover, 2010). However, this

study did not utilize parallel forms to measure NOCs' and children's reports of traumatic stress symptomatology.

The present study examined whether children's self-reports of their own PTSD symptomatology correlated with NOCs' estimates of their children's PTSD symptomatology. The present study then determined whether the children's self-reported PTSD symptomatology and NOCs' estimates of the children's PTSD symptomatology accounted for any distinct variance in the NOCs' STS levels. Measures of NOCs' estimates and children's self-reported PTSD symptomatology directly paralleled measures of NOCs' STS symptomatology.

#### Method

#### **Participants and Procedure**

Data for the present study was partially obtained from archives at a children's advocacy center in the midwestern United States. Permission to use the archival data was obtained from the executive director of the children's advocacy center. Exactly 121 sets of children and non-offending caregivers (NOCs) completed measures during trauma assessments prior to Institutional Review Board approval of the present study. Following Institutional Review Board approval, additional data was collected from 29 sets of children and NOCs.

Children were presented with informed assent forms and NOCs were presented with informed consent forms after completing their trauma assessments. The informed assent and consent forms outlined confidentiality agreements; the purposes, benefits, and risks associated with the present study; and participants' rights. Signatures from children and NOCs were required in order for data from the trauma assessments to be included in the present study.

The final sample (N=150) varied in its composition—children's genders (F=74%, M=26%), NOCs' genders (F=80%, M=20%), children's ages (M=9.89, SD=4.08), children's ethnicities (Caucasian=74%,  $Black\ or\ African\ American=4\%$ ,  $Hispanic\ or\ Latinx=10.7\%$ ,  $American\ Indian\ or\ Alaskan\ Native=6.7\%$ , and biracial=4.7%), and familial structures ( $Biological\ NOCs=87.3\%$ ,  $Kinship\ NOCs=7.3\%$ , and  $Foster\ NOCs=5.3\%$ ).

#### **Materials**

Structured Intake Interviews.

NOCs were asked to indicate whether or not they had personal trauma histories during their structured intake interviews. Kinship and foster NOCs were also asked to indicate how long their children had been in their care during their structured intake interviews.

FRIENDS Protective Factors Survey (PFS).

The PFS (Counts, Buffington, Chang-Rios, Rasmussen, & Preacher, 2010) was developed by the FRIENDS National Resource Center for Community-Based Child Abuse Prevention in partnership with the University of Kansas Institute for Educational Research and Public Service through funding provided by the United States Department of Health and Human Services. The PFS was used to obtain information from NOCs regarding their children's ages, genders, and ethnicities.

The Posttraumatic Stress Disorder Checklist for the Diagnostic and Statistical Manual of Mental Disorders— Fifth Edition (PCL-5).

The PCL-5 (Blevins, Weathers, Davis, Witte, & Domino, 2015) is a 20-item self-report instrument that assesses the 20 symptoms of PTSD listed in the Diagnostic and Statistical

Manual of Mental Disorders—Fifth Edition (DSM-5). NOCs endorsed items on the PCL-5 based on their experiences one month prior to completing the PCL-5. The present study utilized the PCL-5 to measure NOCs' secondary traumatic stress (STS) symptomatology following their children's disclosures of sexual or physical abuse.

Items on the PCL-5 openly inquire about the STS symptomatology the PCL-5 is designed to measure (e.g., Intrusion: "Repeated, disturbing, and unwanted memories of the stressful experience"; Avoidance: "Avoiding memories, thoughts, or feelings related to the stressful experience"; Negative Alterations in Cognitions and Mood: "Blaming yourself or someone else for the stressful experience or what happened after it"; and Alterations in Arousal and Reactivity: "Feeling jumpy or easily startled"). PCL-5 Global scores range from 0 to 80, and each item is scaled from 0 to 4 (i.e., 0= Not at all; 1= A little bit; 2= Moderately; 3= Quite a bit; 4= Extremely). Intrusion, Avoidance, Negative Alterations in Cognitions and Mood, and Alterations in Arousal and Reactivity Subscale scores range from 0 to 20, 0 to 8, 0 to 28, and 0 to 24, respectively. A cutoff score of 33 can be used to identify clinically significant STS in NOCs. The psychometric properties of the PCL-5 were assessed by the developers of the PCL-5 in one study involving trauma-exposed college students. In the study (N= 278), PCL-5 scores exhibited strong internal consistency ( $\alpha$ = .94), test-retest reliability (r= .82), convergent validity (rs = .74 to .85), and discriminant validity (rs= .31 to .60).

The Child Posttraumatic Stress Disorder Symptom Scale (CPSS).

The CPSS (Foa, Johnson, Feeny, & Treadwell, 2001) measures the severity of PTSD symptoms and functional impairment in children ages 7 to 18 as reported by children and their

NOCs, respectively. All children and NOCs completed the CPSS about the same potentially traumatic event (PTE). Then, the present study examined whether children's self-reports of their own PTSD symptomatology on the CPSS correlated with NOCs' estimates of their children's PTSD symptomatology on the CPSS. The present study then determined whether the children and NOCs' CPSS scores accounted for any distinct variance in the NOCs' STS levels using the PCL-5, which parallels each item on the CPSS. The present study also examined factors influencing the discrepancy ratios (i.e., difference scores) between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology on the CPSS. These factors included the nature of the abuse, NOCs' relationships with the initiators of the abuse, children's ages and genders, NOCs' genders, NOCs' personal trauma histories, familial structures, and the elapsed time between children's disclosures of abuse and their trauma assessments.

The first 20 items on the CPSS comprise a scale that assesses for global symptoms of PTSD. The final 7 items on the CPSS assess children's overall functioning. Items measuring overall functioning were not included in statistical analyses used in the present study due to there being no comparable items on the PCL-5.

Items on the CPSS openly inquire about the symptoms of PTSD the CPSS is designed to measure (e.g., Intrusion: "Did you/your child have upsetting thoughts or pictures about the experience that came into your/your child's head when you didn't want them to?"; Avoidance: "Did you/your child try not to think about, talk about, or have feelings about the experience?"; Negative Alterations in Cognitions and Mood: "Did you/your child have strong upsetting

feelings like fear, anger, guilt, or shame?"; Alterations in Arousal and Reactivity: "Did you/your child have trouble falling or staying asleep?").

CPSS Global scores range from 0 to 80. Each item on the CPSS is scaled from 0 to 4 (i.e., 0= Not at all/I don't know; 1= Once a week or less/a little; 2= 2 to 3 times a week/somewhat; 3= 4 to 5 times a week/a lot; 4= 6 or more times a week/almost always). Intrusion, Avoidance, Negative Alterations in Cognitions and Mood, and Alterations in Arousal and Reactivity Subscale scores range from 0 to 20, 0 to 8, 0 to 28, and 0 to 24, respectively. A cutoff score of 31 can be used for identifying a probable PTSD diagnosis in children (Foa, Asnaani, Zang, Capaldi, & Yeh, 2018). CPSS Global scores have demonstrated high internal consistency, with alpha coefficients of .93 and .91, respectively (Stewart, Ebesutani, Drescher, & Young, 2017).

#### **Aims and Analytic Strategy**

The present study calculated point-biserial correlation coefficients to determine the strength of the interactions between NOCs' self-reports of STS on the PCL-5 and the nature of the abuse, NOCs' relationships with the initiators of the abuse, children's ages and genders, and CPSS Global and Subscale scores (Children's Reports and NOCs' Reports). Next, Analyses of Covariance (ANCOVAs) were calculated to determine if NOCs' relationships with the initiators of abuse, congruous and incongruous child and NOC genders, congruous and incongruous child and NOC trauma histories, and familial structures predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. Variance accounted for by the elapsed time between children's disclosures of abuse and their trauma assessments was controlled for in all analyses. Finally,

independent linear regression analyses assessed the extent to which the nature of the abuse, NOCs' relationships with the initiators of the abuse, the ages and genders of the children, and NOCs' CPSS Global and Subscale scores predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. As a secondary objective, the present study calculated point-biserial correlation coefficients to determine interaction strengths between discrepancy ratios (i.e., the difference between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology on the CPSS) and the nature of the abuse, NOCs' relationships with the initiators of the abuse, children's ages and genders, congruous and incongruous child and NOC genders, and familial structures. Next, ANCOVAs were calculated to determine if children's ages and genders predicted discrepancy ratios between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD symptomatology. Variance accounted for by the elapsed time between children's disclosures of abuse and their trauma assessments was controlled for in all analyses.

#### Results

#### **Descriptive Statistics**

Tables 1 and 2 provide descriptive statistics for Secondary Traumatic Stress (STS) predictor variables and symptomatology reported on the PCL-5, CPSS-Child Report, and CPSS-Non-Offending Caregiver (NOC) Report. Of note, all NOCs who indicated personal trauma histories that were incongruous with their children's personal trauma histories (23.3%) reported experiencing domestic violence prior to their children's disclosures of abuse. CPSS sample sizes (N=111) and the total sample size (N=150) differed in the present study due to age constraints

placed on the CPSS-Child Report by test developers (i.e. children had to be at least 7 years old to provide self-reports of their own PTSD symptomatology during their trauma assessments; Foa et al., 2001). Exactly 24% of NOCs were identified as having STS based on the clinical cutoff score of 33 recommended by PCL-5 test developers (Blevins et al., 2015). Per their own self-reports, approximately 44% of children were identified as having a probable PTSD diagnosis based on the clinical cutoff score of 31 identified by CPSS test developers (Foa et al., 2001). Per NOCs' estimates, 18% of children were identified as having a probable PTSD diagnosis based on the clinical cutoff score of 31 identified by CPSS test developers (Foa et al., 2001).

Table 1. Descriptive Statistics for Predictors of Secondary Traumatic Stress Symptomatology

Predictors of STS Symptomatology	Cell Proportional Assignmen	Cell Proportional Assignments								
Nature of the Abuse	Sexual Abuse= 88%	Physical Abuse= 12%								
NOC Relationship**	Romantic Partner= 31.7%	Other Known Person= 68.3%								
Child Age	3 to 10= 53.3%	11 to 18= 46.7%								
Child Gender	Male= 26%	Female= 74%								
NOC Gender ***	Congruous= 66%	Incongruous= 34%								
Familial Structure	Biological NOC= 87.3%	Kinship or Foster NOC= 12.7%								
NOC Trauma History ***	Congruent = 16.7%	Incongruent = 23.3%	No Trauma History= 40%							
Natar NOC Nam Office diag Commission CTC	C	41. 41 T.: 4: -4	9.31.4							

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; \*\* with the Initiator of Abuse; \*\*\*Relative to Child

Table 2. Descriptive Statistics for the Criterion Measures of Secondary Traumatic Stress Symptomatology Severity

	N	M	SD	Range
PCL-5 NOC Self-Reported STS Symptomatology				
PCL-5 Global	150	21.120	16.002	0-68
PCL-5 Intrusion	150	6.413	4.965	0-20
PCL-5 Avoidance	150	2.860	2.682	0-8
PCL-5 Negative Alterations in Cognitions and Mood	150	6.300	5.969	0-23
PCL-5 Alterations in Arousal and Reactivity	150	5.500	4.738	0-20
CPSS— Child Self-Reported PTSD Symptomatology				
CPSS Global	111	30.847	17.903	0-76
CPSS Intrusion	111	7.532	5.140	0-20
CPSS Avoidance	111	5.414	2.830	0-8
CPSS Negative Alterations in Cognitions and Mood	111	8.559	7.014	0-24
CPSS Alterations in Arousal and Reactivity	111	9.396	5.858	0-23
CPSS— Estimates of Child PTSD Symptomatology				
CPSS Global	111	17.892	14.022	0-65
CPSS Intrusion	111	3.739	3.926	0-20
CPSS Avoidance	111	2.973	2.768	0-8
CPSS Negative Alterations in Cognitions and Mood	111	5.270	5.210	0-21
CPSS Alterations in Arousal and Reactivity	111	5.910	5.330	0-20

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress

Table 3 demonstrates the nature of the interactions between NOCs' self-reports of their own STS symptomatology (PCL-5) and predictors of STS, children's self-reports of their own PTSD symptomatology (CPSS-Child Report), and NOCs' estimates of their children's PTSD symptomatology (CPSS-NOC Report). Significant point-biserial correlation coefficients were found in 17.1% of comparisons between the PCL-5 and predictors of STS. NOCs' relationships with the initiators of abuse were significantly correlated (p < .05) with PCL-5 Global scores and all PCL-5 Subscale scores aside from Intrusion. Further, familial structure was significantly correlated (p < .05) with PCL-5 Global scores and all PCL-5 Subscale scores. These significant correlations indicate a need for additional analyses that examine the relationships between PCL-5 Global and Subscale scores and NOCs' relationships with the initiators of abuse and familial structures (see Tables 4 and 6). No significant correlation coefficients were found between the CPSS-Child Report and PCL-5, indicating that NOCs' STS symptomatology was not significantly associated with children's self-reported PTSD symptomatology.

Significant correlation coefficients were found in all but two comparisons between the CPSS-NOC Report and PCL-5— there were no significant correlation coefficients found between CPSS-NOC Report Avoidance Subscale scores and PCL-5 Negative Alterations in Cognitions and Mood Subscale scores and Alterations in Arousal and Reactivity Subscale scores. These correlations indicate that NOCs' own STS symptomatology was significantly associated with their estimates of their children's PTSD symptomatology. The lack of correlations between NOCs' estimates of their children's Avoidance symptomatology and NOCs' self-reported Negative Alterations in Cognitions and Mood and Alterations in Arousal and Reactivity

symptomatology indicates that NOCs' perceptions of their children's avoidant behavior is not associated with their own Negative Alterations in Cognitions and Mood and Alterations in Arousal and Reactivity symptomatology.

Additional bivariate correlation coefficients were calculated to determine whether the elapsed time between children's disclosures of abuse and their trauma assessments was associated with NOCs' estimates of their children's PTSD symptomatology, children's self-reported symptomatology, and NOCs' self-reported STS symptomatology. Elapsed time between children's disclosures of abuse was significantly (p < .05) correlated with NOCs' estimated and children's self-reported Negative Alterations in Cognitions and Mood symptomatology as well as NOCs' Negative Alterations in Cognitions and Mood STS symptomatology. These symptoms appeared to peak immediately after disclosures of abuse and subside over time.

Table 3. Point-Biserial Correlation Matrix of the PCL-5, Predictors of Secondary Traumatic Stress, and CPSS—Child and NOC Reports

				PCL-5	
				Negative Alterations	PCL-5
	PCL-5	PCL-5	PCL-5	in	Alterations in
	Global	Intrusion	Avoidance	Cognitions and Mood	Arousal and Reactivity
	r	r	r	r	r
Predictors of STS					
Nature of the Abuse	.079	.018	.096	.101	.083
NOC Relationship with Initiator of Abuse	188°	120	202*	182*	171*
Child Age	057	027	021	058	085
Child Gender	.144	.120	.191*	.150	.079
NOC Gender	101	.137	083	093	040
Familial Structure	282***	247**	242**	262**	223**
CPSS-Child Self-Reported PTSD Symptoms					
CPSS Global	.075	.119	011	.075	.053
CPSS Intrusion	.056	.066	019	.090	.038
CPSS Avoidance	.129	.160	.005	.137	.100
CPSS Negative Alterations in Cognitions and Mood	.060	.111	017	.068	.021
CPSS Alterations in Arousal and Reactivity	.042	.091	.016	007	.057
CPSS-NOC Estimates of Child PTSD Symptoms					
CPSS Global	.405***	.404***	.321**	.317**	.364***
CPSS Intrusion	.327***	.347***	.227*	.260**	.284**
CPSS Avoidance	.208*	.242°	.200*	.163	.137
CPSS Negative Alterations in Cognitions and Mood	.312**	.307**	.217*	.245**	.289**
CPSS Alterations in Arousal and Reactivity	.411***	.382***	.361***	.318**	.394***

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; N= 150; Nature of the Abuse (Sexual Abuse); NOC Relationship with Initiator of Abuse (Romantic Partner; Other Known Person); Child Age (3 to 10; 11 to 18); NOC Gender (Congruous with Child's Gender; Incongruous with Child's Gender); Familial Structure (Biological NOC; Kinship and Foster NOC); Elapsed Time Between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses; p<.05\* p<.01\* p<.001\*\*\*

Table 4 depicts a series of ANCOVAs used to test the predictive value of NOCs' relationships with the initiators of abuse on NOCs' self-reports of their own STS symptomatology on the PCL-5. Variance accounted for by the elapsed time between children's disclosures of abuse and trauma assessments was controlled for in all analyses. PCL-5 Global scores and all PCL-5 Subscale scores, aside from Intrusion Subscale scores, differed significantly (p < .05) between NOCs who were in romantic relationships with the initiators of the abuse and NOCs who were not in romantic relationships with the initiators of the abuse. These results indicate that NOCs who were in romantic relationships with the initiators of their children's abuse experienced more STS symptomatology in all areas aside from Intrusion symptomatology than NOCs who were not in romantic relationships with the initiators of their children's abuse. Additional ANCOVAs were conducted to test the predictive value of the nature of the abuse, children's ages and genders, and NOCs' genders on NOCs' self-reports of their own STS symptomatology on the PCL-5. Aside from PCL-5 Avoidance scores being significantly elevated (p < .05) in NOCs of female children, no significant results were found. These results indicate that NOCs exhibit more avoidant behavior when their children are female, but that the nature of the abuse, children's ages, and NOCs' own genders do not predict NOCs' traumatic stress symptomatology.

Table 4. NOC Relationship with Initiator of Abuse Analyses of Covariance on Secondary Traumatic Stress Symptomatology

	Romantic	Romantic Partner			Other Known Person			Relationship Significance	
NOC Self-Reported STS Symptomatology	M	SE	N		M	SE	N	E	
PCL-5	IVI	SE	IV		IVI	SE	IV	Г	$n_{p2}$
	25.53								
Global	3	2.324	46		19.368	1.582	99	$4.798^{*}$	.033
Intrusion	7.342	.734	46		6.104	.500	99	1.937	.013
Avoidance	3.731	.391	46		2.549	.267	99	$6.220^{*}$	.042
Negative Alterations in Cognitions and Mood	7.805	.854	46		5.666	.582	99	4.273*	.029
Alterations in Arousal and Reactivity	6.654	.692	46		4.979	.471	99	3.999*	.027

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments (M=26.94, SD=22.95, Range=0 to 183) served as a covariate in all analyses;  $p<.05^{\circ} p<.01^{\circ\circ} p<.001^{\circ\circ}$ 

Table 5 depicts a series of 2 (Congruous vs. Incongruous NOC and Child Genders) x 3 (NOC Trauma History Classifications) ANCOVAs used to test the predictive value of NOCs having no trauma histories, trauma histories congruous with their children's trauma histories, and trauma histories incongruous with their children's trauma histories on NOCs' self-reports of their own STS symptomatology on the PCL-5. Variance accounted for by the elapsed time between the children's disclosures of abuse and trauma assessments was controlled for in all analyses. The 2 (Congruous vs. Incongruous NOC and Child Genders) by 3 (NOC Trauma History Classifications) grouping was statistically insignificant (p > .05) for all analyses, so all results were aggregated across congruous and incongruous NOC genders. NOCs' trauma histories congruous with their children's trauma histories were not associated with significant (p < .05) elevations in PCL-5 Global or Subscale scores. PCL-5 Global scores and PCL-5 Negative Alterations in Cognitions and Mood Subscale scores differed significantly (p < .05) between NOCs without trauma histories and NOCs with trauma histories incongruous with their children's trauma histories and NOCs with trauma histories incongruous with their

had higher overall STS symptomatology and higher Negative Alterations in Cognitions and Mood symptomatology than NOCs without histories of trauma.

Table 5. NOC Trauma History Classification Analyses of Covariance on Secondary Traumatic Stress Symptomatology

	No Trauma History			Congruous Trauma History			Incongruous Trauma History			Trauma History Significance	
NOC Self-Reported STS Symptomatology PCL-5	M	SE	N	M	SE	N	M	SE	N	F	$n_{p2}$
Global	17.371 a	1.80 8	90	16.697	7.935	25	30.504 <sup>b</sup>	4.698	35	3.449*	.046
Intrusion	5.399	.567	90	5.273	2.487	25	8.224	1.472	35	1.623	.022
Avoidance	2.466	.310	90	2.366	1.360	25	4.246	.805	35	2.159	.029
Negative Alterations in Cognitions and Mood	5.184 <sup>a</sup>	.673	90	5.495	2.955	25	10.110 <sup>b</sup>	1.749	35	3.462*	.046
Alterations in Arousal and Reactivity	4.323	.537	90	3.459	2.356	25	7.592	1.395	35	2.537	.018

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; Cell differences indicated by letters; Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses;  $p<.05^*$   $p<.01^{***}$ 

Table 6 depicts a series of ANCOVAs used to test the predictive value of familial structures on NOCs' self-reports of their own STS symptomatology on the PCL-5. Variance accounted for by the elapsed time between children's disclosures of abuse and trauma assessments was controlled for in all analyses. PCL-5 Global and Subscale scores differed significantly (p < .05) between biological NOCs and kinship and foster NOCs. These results indicate that biological NOCs experienced significantly higher STS symptomatology in all areas relative to kinship and foster NOCs.

Table 6. Familial Structure Analyses of Covariance on Secondary Traumatic Stress Symptomatology

	Biological	Biological NOCs		Kinship a	nd Foster NO	OCs	Familial Structure Significance	
NOC Self- Reported STS Symptomatology	M	SE	N	М	SE	N	F	$n_{p2}$
PCL-5								
Global	22.838	1.342	131	9.278	3.525	19	12.925***	.081
Intrusion	6.879	.423	131	3.205	1.110	19	9.566**	.061
Avoidance	3.106	.229	131	1.161	.600	19	9.172**	.059
Negative Alterations in Cognitions and Mood	6.897	.495	131	2.183	1.301	19	11.467**	.072
Alterations in Arousal and Reactivity	5.902	.405	131	2.729	1.064	19	7.775**	.050

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; Cell differences indicated by letters; Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses; p<.01\*\* p<.001\*\*\*\*

Table 7 depicts independent linear regression analyses that assessed the extent to which the nature of the abuse, NOCs' relationships with the initiators of the abuse, and children's ages and genders predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. The predictive model for PCL-5 Global scores was significant (F= 2.424, p < .05, Adjusted R<sup>2</sup> = .038, SE= 15.694). The predictive model for PCL-5 Avoidance Subscale scores was significant (F= 3.157, p < .05, Adjusted R<sup>2</sup> = .057, SE= 2.605). The predictive model for PCL-5 Negative Alterations in Cognitions and Mood Subscale scores was significant (F= 2.564, p < .05, Adjusted  $R^2 = .042$ , SE = 5.844). NOCs' relationships with the initiators of the abuse accounted for unshared variance in PCL-5 Global scores ( $\beta$ = -.194, SE= 2.896, p= .023), Avoidance Subscale scores ( $\beta$ = -.211, SE= .481, p= .013), Negative Alterations in Cognitions and Mood Subscale scores ( $\beta = -.193$ , SE= 1.078, p=.024), and Alterations in Arousal and Reactivity Subscale scores ( $\beta$ = -.183, SE= .863, p= .033). These results indicate that the NOCs' relationships with the initiators of abuse played a significant role in whether or not NOCs' developed STS symptomatology, aside from Intrusion symptomatology, after their children's disclosures of abuse.

Table 7. Regression Prediction Models for Secondary Traumatic Stress Symptomatology Using Secondary Traumatic Stress Predictor Variables

NOC Self- Reported STS Symptomatology	Standardized Beta Coefficients	SE	_ t	_ <i>p</i>
PCL-5				
Global				
Nature of the Abuse	072	2.695	855	.394
NOC Relationship with Initiator of Abuse	194	2.896	-2.295	.023*
Child Age	.076	4.475	.839	.403
Child Gender	.127	3.317	1.391	.167
Intrusion				
Nature of the Abuse	043	.852	500	.618
NOC Relationship with Initiator of Abuse	113	.915	-1.307	.193
Child Age	005	1.414	050	.960
Child Gender	.130	1.048	1.397	.165
Avoidance				
Nature of the Abuse	043	.447	514	.608
NOC Relationship with Initiator of Abuse	211	.481	-2.521	.013*
Child Age	.079	.743	.873	.384
Child Gender	.166	.551	1.842	.068
Negative Alterations in				
Mood and Cognition				
Nature of the Abuse	075	1.004	894	.373
NOC Relationship with Initiator of Abuse	193	1.078	-2.284	.024*
Child Age	.100	1.666	1.099	.274
Child Gender	.125	1.235	1.370	.173
Alterations in				
Arousal and Reactivity				
Nature of the Abuse	088	.804	-1.035	.303
NOC Relationship with Initiator of Abuse	183	.863	-2.154	.033*
Child Age	.108	1.334	1.180	.240
Child Gender	.053	.989	.581	.562

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; Nature of the abuse (Sexual Abuse; Physical Abuse); NOC Relationship with Initiator of Abuse (Romantic Partner; Other Known Person); Child Age (3 to 10; 11 to 18); Pairwise exclusions were used for missing data;  $p<.05^*$   $p<.01^{***}$   $p<.001^{***}$ 

Table 8 depicts independent linear regression analyses that assessed the extent to which NOCs' estimates of their children's PTSD symptoms (CPSS-NOC Report) predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. The predictive model for PCL-5 Global scores was significant (F= 5.986, p < .001, Adjusted R<sup>2</sup> = .153, SE= 14.723). The predictive model for PCL-5 Intrusion Subscale scores was significant (F= 5.602, p < .001, Adjusted R<sup>2</sup> = .143, SE= 4.595). The predictive model for PCL-5 Avoidance Subscale scores was

significant (F= 4.162, p < .004, Adjusted R<sup>2</sup> = .103, SE= 2.54). The predictive model for PCL-5 Negative Alterations in Cognitions and Mood Subscale scores was significant (F= 3.341, p < .05, Adjusted R<sup>2</sup> = .078, SE= 5.731). The predictive model for PCL-5 Alterations in Arousal and Reactivity Subscale scores was significant (F= 5.339, p < .01, Adjusted R<sup>2</sup> = .136, SE= 4.404). NOCs' estimates of Alterations in Arousal and Reactivity Subscale scores accounted for unshared variance for PCL-5 Global scores ( $\beta$ = .316, SE= .369, p= .011), PCL-5 Intrusion Subscale scores ( $\beta$ = .249, SE= .115, p= .046), PCL-5 Avoidance Subscale scores ( $\beta$ = .361, SE= .064, p= .005), and PCL-5 Alterations in Arousal and Reactivity Subscale scores ( $\beta$ = .334, SE= .110, p= .008). These results indicate that NOCs' perceptions of their children's Alterations in Arousal and Reactivity symptomatology played a significant role in whether or not NOCs' developed STS symptomatology, aside from Negative Alterations in Cognitions and Mood symptomatology, after their children's disclosures of abuse.

Additional independent linear regression analyses were conducted to assess the extent to which children's self-reports of their own PTSD symptomatology (CPSS—Child Report) predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. No significant results were found. These results indicate that children's self-reported PTSD symptomatology did not predict NOCs' STS symptomatology.

Table 8. Regression Prediction Models for Secondary Traumatic Stress Symptomatology Using the CPSS—NOC Report

NOC Self- Reported STS Symptomatology PCL-5	Standardized Beta Coefficients	SE	f	n
1020	Both Coefficients	J.E	-	P
Global				
CPSS Intrusion	.143	.472	1.230	.222
CPSS Avoidance	014	.616	135	.893
CPSS Negative Alterations in Cognitions and Mood	.035	.378	.286	.775
CPSS Alterations in Arousal and Reactivity	.316	.369	2.573	.011*
Intrusion				
CPSS Intrusion	.176	.147	1.513	.133
CPSS Avoidance	.029	.192	.271	.787
CPSS Negative Alterations in Cognitions and Mood	.036	.118	.294	.769
CPSS Alterations in Arousal and Reactivity	.249	.115	2.017	.046*
Avoidance				
CPSS Intrusion	.031	.082	.259	.796
CPSS Avoidance	.064	.106	.579	.564
CPSS Negative Alterations in Cognitions and Mood	066	.065	522	.603
CPSS Alterations in Arousal and Reactivity	.361	.064	2.858	.005*
N C ALC CO C IN I				
Negative Alterations in Cognitions and Mood CPSS Intrusion	120	104	004	222
	.120	.184	.994	.323
CPSS Avoidance	013	.240	116	.908
CPSS Negative Alterations in Cognitions and Mood	.033	.147	.256	.799
CPSS Alterations in Arousal and Reactivity	.236	.143	1.839	.069
Alterations in Arousal and Reactivity				
CPSS Intrusion	.123	.141	1.053	.295
CPSS Avoidance	087	.184	813	.418
CPSS Negative Alterations in Cognitions and Mood	.044	.113	.357	.722
CPSS Alterations in Arousal and Reactivity	.334	.110	2.696	.008**

Note: NOC= Non-Offending Caregiver; STS= Secondary Traumatic Stress; Pairwise exclusions were used for missing data; p<.05\* p<.01\*\* p<.001\*\*\*

Table 9 demonstrates the nature of the interactions between discrepancy ratios (i.e., the difference between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology on the CPSS) and discrepancy ratio predictors. Significant point-biserial correlation coefficients were found in 26.7% of comparisons. The interactions between CPSS Global and Intrusion discrepancy ratios and children's ages and genders were significant (p < .05). These results indicate that having older children and female children were associated with fewer discrepancies between NOCs' estimates and children's self-reported PTSD symptomatology overall and with regard to Intrusion symptomatology. NOCs' relationships with the initiators of the abuse and children's ages were significantly (p < .05) correlated with CPSS Negative Alterations in Cognitions and Mood.

These results indicate that not being in romantic relationships with the initiators of abuse and having older children were associated with fewer discrepancies between NOCs' estimates and children's self-reported Negative Alterations in Cognitions and Mood symptomatology. No significant correlation coefficients were found between the nature of the abuse, NOCs' genders, familial structures, and the discrepancy ratios. These results indicate that these factors did not contribute to larger or smaller discrepancy ratios between NOCs' estimated and children's self-reported PTSD symptomatology.

Table 9. Point-Biserial Correlation Matrix of Discrepancy Ratio Predictors

	CPSS Global Discrepancy Ratios	CPSS Intrusion Discrepancy Ratios	CPSS Avoidance Discrepancy Ratios	CPSS Negative Alterations in Cognitions and Mood Discrepancy Ratios	CPSS Alterations in Arousal and Reactivity Discrepancy Ratios
	r	R	r	r	r
Discrepancy Ratio Predictors					
Nature of the Abuse	089	028	112	153	003
NOC Relationship with Initiator of Abuse	177	096	103	223*	128
Child Age	228*	218*	065	231*	174
Child Gender	192*	264**	050	187	090
NOC Gender	.102	.122	.054	.137	.010
Familial Structure	129	064	.028	106	199

Note: NOC= Non-Offending Caregiver; N=111; Nature of the Abuse (Sexual Abuse; Physical Abuse); NOC Relationship with Initiator of Abuse (Romantic Partner; Other Known Person); Child Age (7 to 10; 11 to 18); NOC Gender (Congruous with Child's Gender; Incongruous with Child's Gender); Familial Structure (Biological NOCs; Kinship and Foster NOCs); Elapsed Time Between Children's Disclosures of Abuse and Trauma Assessments (M=26.94, SD=22.95, Range= 0 to 183) served as a covariate in all analyses;  $p<.05^*$   $p<.01^{***}$   $p<.001^{***}$ 

Table 10 demonstrates the nature of the interactions between discrepancy ratios (i.e., the difference between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology on the CPSS) and NOCs' self-reports of their own STS symptomatology on the PCL-5. Significant point-biserial correlation coefficients were found in 32% of comparisons. There were significant (p < .05) interactions between CPSS Global discrepancy ratios and PCL-5 Global scores, Avoidance Subscale scores,

and Alterations in Arousal and Reactivity Subscale scores. These results indicate that higher discrepancy ratios were associated with higher Avoidance and Alterations in Arousal and Reactivity symptomatology in NOCs. The interactions between CPSS Alterations in Arousal and Reactivity discrepancy ratios and PCL-5 Global and Subscale scores were significant (p < .05). These results indicate that higher discrepancies in NOCs' estimates and children's self-reported PTSD symptomatology were associated with higher STS symptomatology overall and higher Intrusion, Avoidance, Negative Alterations in Cognitions and Mood, and Alterations in Arousal and Reactivity symptomatology.

Additional independent linear regression analyses were conducted to assess the extent to which discrepancy ratios predicted NOCs' self-reports of their own STS symptomatology on the PCL-5. No significant results were found, indicating that discrepancy ratios themselves may not predict NOCs' STS symptomatology.

Table 10. Biserial Correlation Matrix of the PCL-5 and CPSS Discrepancy Ratios

	PCL-5 Global	PCL-5 Intrusio n	PCL-5 Avoidanc e	PCL-5 Negative Alterations in Cognitions and Mood	PCL-5 Alterations in Arousal and Reactivity
	r	r	r	r	r
CPSS Discrepancy Ratios					
Global	.223*	.181	$.241^{*}$	.160	.214*
Intrusion	.171	.176	.170	.096	.158
Avoidance	.061	.063	.156	.019	.028
Negative Alterations in Cognitions and					
Moods	.156	.107	.162	.105	.177
Alterations in Arousal and Reactivity	.277**	.214*	.261**	.247**	.253**

Note: Elapsed Time Between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses;  $p < .05^* p < .01^{**} p < .001^{***}$ 

Table 11 depicts a series of ANCOVAs used to test the predictive value of children's ages on the discrepancy ratios between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology

on the CPSS. Variance accounted for by the elapsed time between the children's disclosures of abuse and trauma assessments was controlled for in all analyses. Discrepancy ratios in CPSS Global scores and all CPSS Subscale scores, aside from CPSS Avoidance, differed significantly (p < .05) between elementary school-aged children and middle school and high school-aged children. These results indicate that there were larger discrepancies between NOCs' estimates and children's self-reported PTSD symptoms when children were in elementary school as opposed to middle school or high school.

Table 11. Children's Age Analyses of Covariance on Discrepancy Ratios

	7 to 10	to 10 11 to 18					Age Signific	cance
CPSS Discrepancy Ratios	M	SE	N	M	SE	N	F	$n_{p2}$
						·		
				-				
			11	16.26				
Global	-7.309	2.995	1	2	2.289	111	$5.614^*$	.049
			11					
Intrusion	-2.205	.894	1	-4.723	.684	111	4.981*	.044
			11					
Avoidance	-2.083	.541	1	-2.651	.414	111	.691	.006
Avoidance	-2.003	.541	11	-2.031	.717	111	.071	.000
Negative Alterations in Cognitions and Mood	-1.096	1.174	1	-4.572	.897	111	5.512*	.049
Negative Atterations in Cognitions and Mood	-1.090	1.1/4	1 1 1	-4.372	.097	111	3.312	.049
			11					
Alterations in Arousal and Reactivity	-1.917	1.092	1	-4.406	.835	111	3.262	.029

Note: Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses;  $p<.05^*$   $p<.01^{**}$   $p<.001^{***}$ 

Table 12 depicts a series of ANCOVAs used to test the predictive value of children's genders on the discrepancy ratios between children's self-reports of their own PTSD symptomatology on the CPSS and NOCs' estimates of their children's PTSD symptomatology on the CPSS. Variance accounted for by the elapsed time between the children's disclosures of abuse and trauma assessments was controlled for in all analyses. Discrepancy ratios in CPSS Global scores and CPSS Intrusion Subscale scores differed significantly (p < .05) in male and female children. These results indicate that there were larger discrepancies between NOCs'

estimates and children's self-reported PTSD symptoms when children were male as opposed to female.

Table 12. Children's Gender Analyses of Covariance on CPSS Discrepancy Ratios

	Male Ch	Male Children			hildren		Gender Struct	Gender Structure Significance	
CPSS Discrepancy Ratios	M	SE	N	M	SE	N	F	$n_{p2}$	
Global	-6.073	3.849	111	14.955	2.075	111	4.126*	.037	
Intrusion	973	1.126	111	-4.613	.607	111	8.089**	.070	
Avoidance	-2.109	.693	111	-2.538	.373	111	.297	.003	
Negative Alterations in Cognitions and Mood	665	1.509	111	-4.051	.814	111	3.889	.035	
Alterations in Arousal and Reactivity	-2.325	1.409	111	-3.824	.760	111	.876	.008	

Note: Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments (M= 26.94, SD= 22.95, Range= 0 to 183) served as a covariate in all analyses;  $p < .05^* p < .01^{**} p < .001^{***}$ 

#### **Discussion**

Current understanding of secondary traumatic stress (STS) in non-offending caregivers (NOCs) of children with histories of sexual or physical abuse has been limited by the availability of clinical samples wherein STS could be measured. The clinical sample used in the present study was invariably small in size, and the range of potential modulating variables was limited by constraints placed on assessment and treatment protocols governing data collection within the selected clinical sample. The clinical sample in the present study did, however, provide an opportunity to examine several predictors and main effects of both children's and NOCs' traumatic stress symptomatology.

Data generated in the present study adds to the growing body of literature suggesting that NOCs experience substantial levels of STS following their children's disclosures of abuse irrespective of the nature of the abuse and children's ages and genders (Lyon & Kouloumpos-Lenares, 1987; Sirles & Frank, 1989; Stroud, 1999). Further, NOCs' levels of STS did not seem

to vary as a function of gender congruence with their children, thus contradicting findings in related literature (Stroud, 1999).

#### The Effect of Non-Offending Caregivers' Relationships with the Initiators of Abuse

STS symptoms of Avoidance, Negative Alterations in Cognitions and Mood, and Alterations in Arousal and Reactivity were higher among NOCs who were in romantic relationships with the initiators of their children's abuse. These results contradict findings in established literature suggesting that NOCs discredit their children's disclosures and support their children less when the initiators of the abuse were their romantic partners (Elliot & Briere, 1994; Everson et al., 1989; Faller, 1984; Faller, 1988; Gomes-Schwartz et al., 1990; Lawson & Chaffin, 1992; Leifer et al., 2001; Pintello & Zuravin, 2001; Sirles & Frank, 1989). NOCs' heightened distress may have manifested in Avoidance symptomatology on the PCL-5, specifically in hesitancy to seek social support in the aftermath of their children's disclosures of abuse. NOCs in this clinical sample also appeared to have Negative Alterations in Cognitions and Mood symptomatology, namely indicating feeling guilt or shame on the PCL-5 when their children were sexually or physically abused by their romantic partners. Feelings of shame may also explain NOCs' Avoidance symptomatology.

Further, feelings of guilt may have manifested in NOCs' Alterations in Arousal and Reactivity symptomatology. If NOCs experienced guilt for not initially protecting their children from their romantic partners, these feelings may have led to heightened efforts to protect their children from future abuse (e.g., indicating hypervigilance on the PCL-5). Being in a romantic relationship with the initiator of abuse did not lead to significant Intrusion symptomatology in

NOCs in this clinical sample. This may be because NOCs in this sample were only exposed to their children's experiences of sexual and physical abuse through their children's explicit accounts of the abuse. Further, NOCs' Intrusion symptomatology was better explained by their estimates of their children's Alterations in Arousal and Reactivity Symptomatology.

#### The Effect of Non-Offending Caregivers' Personal Trauma Histories

Negative Alterations in Cognitions and Mood symptomatology was significantly higher among NOCs with trauma histories that were incongruous to their children's trauma histories (i.e., among NOCs with histories involving exposure to domestic violence). These results contradict findings in established literature suggesting that NOCs' responses to disclosures of abuse are not associated with their own trauma histories (Deblinger et al., 1994; De Jong, 1988; Heriot, 1996; Hubbard, 1989; Leifer et al., 2001; Salt et al., 1990). Further, NOCs exposed to domestic violence may have experienced primary trauma symptoms associated with this exposure. These results support findings in established literature suggesting that individuals with trauma histories may find it difficult to adjust to a recent critical incident if they are having recurrent, distressing memories of traumatic events they experienced in the past (Adams et al., 2001; Brady et al., 1999; Pearlman & MacIan, 1995).

STS symptomatology was not elevated among the subset of NOCs who experienced abuse congruous with the abuse their children experienced (i.e., childhood sexual or physical abuse). This result contradicts findings in established literature suggesting that having a trauma history is an indicator of traumatic stress symptomatology even when individuals only

experience a traumatic event vicariously (Marmar et al., 1996; Resick, 2000; Rosenthal, 2000; Son et al., 1998; Van der Kolk et al., 1996).

#### **The Effect of Familial Structures**

STS symptoms appeared to emerge, at least partially, as a function of familial structure. Biological NOCs reported higher STS than kinship or foster NOCs with regard to symptoms of Intrusion, Avoidance, Negative Alterations in Cognitions and Mood, and Alterations in Arousal and Reactivity. These results support findings in established literature that suggest that biological NOCs experience significantly more distress than foster NOCs (Lipton, 1997; McLain, 2008) following their children's disclosures of abuse. The extent to which these results reflect a genetic predisposition to react strongly to children's abuse could not be firmly established from this data set. However, biological NOCs in this clinical sample typically had longer relationships with their children than kinship and foster NOCs which may have influenced their levels of STS symptomatology.

#### The Effect of Elapsed Time between Children's Disclosures of Abuse and Trauma Assessments

The potential impact of elapsed time between children's disclosures of abuse and their trauma assessments was controlled for in all statistical analyses. Additional bivariate correlation coefficient calculations also showed that trauma symptomatology was more severe among both children and NOCs when there were shorter intervals between children's disclosures of abuse and their trauma assessments. Cognitive and mood-related trauma symptoms appeared to peak immediately after disclosures of abuse and subsided over time. The effect sizes of elapsed time

were modest in statistical size. Elapsed times varied widely within the clinical sample. Factors that led to immediate as opposed to more delayed disclosures were not clearly identified.

# The Effect of Relationships between Estimated and Self-Reported Traumatic Stress Symptomatology

Relationships between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD symptomatology were not statistically significant for any criterion measures. NOCs' self-reports of their own STS symptomatology were strongly correlated, however, with their estimates of their children's PTSD symptomatology. These results contradict findings in established literature (Barakat et al., 1997; Daviss et al., 2000; De Vries et al., 1999; Hanson et al., 1992; Kassam-Adams et al., 2006) which suggest that NOCs' STS symptomatology is concordant with their children's PTSD symptomatology. Previous research also found that NOCs' estimates of their children's' PTSD symptomatology mirrored their own traumatic stress symptomatology (Valentino et al., 2010). The results of the present study found just the opposite. NOCs' overall levels of STS and Intrusion, Avoidance, and Alterations in Arousal and Reactivity symptomatology were significantly associated with their own perceptions of their children's Alterations in Arousal and Reactivity PTSD symptomatology. Discrepancy ratios between NOCs' estimates of their children's Alterations in Arousal and Reactivity PTSD symptomatology and children's self-reports of their Alterations in Arousal and Reactivity PTSD symptomatology were significantly correlated with NOCs' selfreports of their own STS symptomatology. These results suggest that NOCs' reports of their own STS symptomatology more accurately mirror their perceptions of their children's PTSD

symptomatology. NOCs may have perceived their children as more aroused and reactive, which may have led to higher overall levels of STS and Intrusion, Avoidance, and Alterations in Arousal and Reactivity symptomatology. These results likely stem from the nature of traumatic stress symptomatology. Intrusion, Avoidance, and Negative Alterations in Cognitions symptomatology are not always outwardly apparent. Negative Alterations in Mood symptomatology is outwardly apparent, but was shown to subside over time in this clinical sample. Alterations in Arousal and Reactivity symptomatology is outwardly apparent and was not affected by elapsed time in this clinical sample. NOCs' Alterations in Arousal and Reactivity symptomatology may also be due to increased norepinephrine in the prefrontal cortex (Southwick et al., 2007).

The discrepancy ratio between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD symptomatology was also larger when children were male or between the ages of 7 and 10. Whether NOCs of male children or children between the ages of 7 and 10 greatly overestimated their children's PTSD symptomatology or whether these children showed less insight regarding their own PTSD symptomatology could not be firmly established from this data set.

#### Conclusions

The findings generated from the present study underscore the importance of examining children's self-reports of their own PTSD symptomatology, NOCs' estimates of their children's PTSD symptomatology, and NOCs' self-reports of their own STS symptomatology concurrently when making recommendations for trauma-informed evidence based treatments. Results from

the present study draw specific attention to the heightened impacts of NOCs' relationships with the initiators of the abuse, NOCs' personal trauma histories, and familial structures on NOCs' STS symptomatology. These heightened impacts appeared to occur as a partial function of NOCs' feelings of guilt and shame, experiences of domestic violence, and biological relationships with their children.

#### Design Limitations and Future Directions

The data obtained in the present study was based entirely on retrospective self-reports without verification of the accuracy of any of the children or non-offending caregivers' (NOCs') recollections. The clinical sample in the present study was also limited in size and restricted to children who experienced sexual or physical abuse. The results of the present study may not generalize well to other clinical or more specialized populations that differ substantially in their composition. Clinical procedures did not provide opportunities to examine the quality of the NOC-child relationships or whether NOCs believed and supported the credibility of their children's disclosures of abuse.

Future research should extend analyses to many different forms of childhood maltreatment including emotional abuse, neglect, drug endangerment, exposure to domestic violence, and childhood sexual and physical abuse. Closer examination of the discrepancy ratio between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD symptomatology is warranted. Future studies should utilize z-scores to demonstrate how this discrepancy ratio is distributed among a larger clinical sample. Closer examination is also warranted to the quality of the relationships between NOCs and their

children. Analyses should include assessments of NOCs' belief in the credibility of their children's disclosures of abuse in addition to NOCs' behavioral expressions of support for their children following these disclosures of abuse.

Clinical practitioners should note the discrepancy ratios between children's self-reports of their own PTSD symptomatology and NOCs' estimates of their children's PTSD symptomatology. Clinical practitioners should also note the high correlation between NOCs' estimates of their children's PTSD symptomatology and NOCs' self-reports of their own STS symptomatology. These reports may often prove to be incongruous, and future research should be focused on discerning which data source is most accurate in trauma-informed treatment planning. When NOCs' estimates of their children's PTSD symptoms are congruous with their children's self-reports of their own PTSD symptoms, it may be optimal for NOCs with subclinical (< 33) self-reported PCL-5 symptoms to participate in trauma-informed evidence based treatments with their children (e.g., Trauma Focused Cognitive Behavioral Therapy, the Child and Family Traumatic Stress Intervention, or Parent Child Interaction Therapy). Should NOCs over-estimate their children's PTSD symptomatology or exceed the clinical cutoff score of 33 on the PCL-5, they may benefit from receiving individual sessions of a trauma-informed evidence based treatment (e.g., Cognitive Processing Therapy). In all cases, clinical practitioners must rely on comprehensive measures, clinical observations, and clinical judgment when referring children and their NOCs for trauma-informed evidence based treatments.

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# Appendix A

#### PCL-5

**Instructions:** Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem in the past month.

	In the past month, how much were you bothered by:	Not at all	A little bit	Mo derately	Quite a bit	Extremely
1.	Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2.	Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3.	Suddenly feeling or acting as if the stressful experience were actually happening again (as if you were actually back there reliving it)?	0	1	2	3	4
4.	Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5.	Having strong physical reactions when something reminded you of the stressful experience (for example, heart pounding, trouble breathing sweating)?	0	1	2	3	4
6.	Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7.	Avoiding external reminders of the stressful experience (for example, people, places, conversations, activities, objects, or situations)?	0	1	2	3	4
8.	Trouble remembering important parts of the stressful experience?	0	1	2	3	4
9.	Having strong negative beliefs about yourself, other people, or the world (for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous)?	0	1	2	3	4
10	Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11	. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4
12	. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13	. Feeling distant or cut off from other people?	0	1	2	3	4
14	. Trouble experiencing positive feelings (for example, being unable to feel happiness or have loving feelings for people close to you)?	0	1	2	3	4
15	. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16	Taking too many risks or doing things that could cause you harm?	0	1	2	3	4
17	Being "superalert" or watchful or on guard?	0	1	2	3	4
18	. Feeling jumpy or easily startled?	0	1	2	3	4
19	. Having difficulty concentrating?	0	1	2	3	4
20	. Trouble falling or staying asleep?	0	1	2	3	4

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## Appendix B

Child's Name	CFTSI ID
This is for your agency's purposes only and will not be entered into the CFTSI data system)	Generated by the CFTSI REDCap system

# The Child PTSD Symptom Scale (CPSS) – 5 Interviewer Version \*\*Pre-CFTSI\*\* CHILD\*\*

#### Date Child Pre-CPSS Completed:

Now let's talk about how you've been feeling about the event IN THE LAST MONTH (or since it happened, if less than a month ago).

A month ago (or when the event happened) would have been (insert date).

Can you remember anything special or different that happened around that time? It could be a birthday, a party, a trip, or something else that happened at school or at home. (Use a calendar if necessary to illustrate the amount of time.)

This will help us to remember what has been happening just in the past month (or since it happened) as I ask you these questions.

 $\Gamma$ m going to be asking you how you have been feeling just about (name the event).  $\Gamma$ Il be sure to mention the amount of time and the event in my questions just so we don't forget.

#### Show the CPSS Pictorial Rating Sheet.

I will read each item. You tell me the number that best describes how often each one has bothered you IN THE LAST MONTH.

0	1	2	3	4
Not at all	Once a week or less/ a little	2 to 3 times a week/ somewhat	4 to 5 times a week/ a lot	6 or more times a week/ almost always

#### Part 1:

1.	Did you have upsetting thoughts or pictures about the experience that came into your head when you didn't want them to?	0	1	2	3	4	
2.	Did you have bad dreams or nightmares?	0	1	2	3	4	
3.	Did you act or feel like the experience was happening again (seeing or hearing something and feeling as if you are there again)?	0	1	2	3	4	
4.	Did you feel upset when you were reminded of what happened (for example, feeling scared, angry, sad, guilty, confused)?	0	1	2	3	4	
5.	Did you have feelings in your body when you were reminded of what happened (for example, breaking out into a sweat, heart beating fast)?	0	1	2	3	4	
6.	Did you try not to think about, talk about, or have feelings about the experience?	0	1	2	3	4	
7.	Did you try to avoid activities, people, or places that reminded you of what happened?	0	1	2	3	4	

CFT SI ID\_ Generated by the CFT SI RED Cap system

# The Child PTSD Symptom Scale (CPSS) – 5 Interviewer Version Pre-CFTSI**CHILD**

0	1	2	3	4
Not at all	Once a week or less/ a little	2 to 3 times a week/	4 to 5 times a week/ a lot	6 or more times a week/almost
		somewhat		always

8.	Did you have trouble remembering an important part of the experience?	0	1	2	3	4	
9.	Did you have bad thoughts about yourself, other people, or the world (for example, "I can't do anything right", "All people are bad", "The world is a scary place")?	0	1	2	3	4	
10.	Did you feel like what happened was your fault (for example, "I should have known better", "I shouldn't have done that")?	0	1	2	3	4	
11.	Did you have strong upsetting feelings like fear, anger, guilt, or shame?	0	1	2	3	4	
12.	Did you have much less interest in doing things you used to like?	0	1	2	3	4	
13.	Did you have trouble feeling close to people? Did you feel like you didn't want to be around other people?	0	1	2	3	4	
14.	Did you have trouble having any good feelings (like happiness or love)?	0	1	2	3	4	
15.	Did you get angry easily (for example, yelling, hitting others, throwing things)?	0	1	2	3	4	
16.	Did you do anything that might hurt yourself (for example, taking drugs, running away)?	0	1	2	3	4	
17.	Were you very careful or on the lookout (for example, checking to see who is around you and what is around you)?	0	1	2	3	4	
18.	Were you jumpy or easily frightened (for example, when someone walks up behind you, when you hear a loud noise)?	0	1	2	3	4	
19.	Did you have trouble paying attention (for example, losing track of a story on TV, forgetting what you read, unable to pay attention in class)?	0	1	2	3	4	
20.	Did you have trouble falling or staying asleep?	0	1	2	3	4	

Child's Name	CFTSI ID
(This is for your assence a number on be and will not be entered into the CETSI data system)	Concreted by the CETSI BEDCon system

# The Child PTSD Symptom Scale (CPSS) – 5 Interviewer Version \*Pre-CFTSI\* CHILD

Part 2:
Have these symptoms been interfering with your everyday life?

21.	Doing your prayers	Yes	No	
22.	Chores and duties at home	Yes	No	
23.	Relationships with friends	Yes	No	
24.	Fun and hobby activities	Yes	No	
25.	Schoolwork	Yes	No	
26.	Relationships with your family	Yes	No	
27.	General happiness with your life	Yes	No	

### Appendix C

Child's Name	CFTSI ID		
(This is for your agency's purposes only and will not be entered into the CFTSI data system)	Generated by the CFTSI REDCup system		

#### The Child PTSD Symptom Scale (CPSS) - 5 Interviewer Version

#### Pre-CFTSI CAREGIVER

#### Date Caregiver Pre-CPSS Completed:

Now let's talk about how your child has been feeling about the event IN THE LAST MONTH (or since it happened, if less than a month ago).

A month ago (or when the event happened) would have been (insert date).

Can you remember anything special or different that happened around that time? It could be a birthday, a party, a trip, or something else that happened at school or at home. (Use a calendar if necessary to illustrate the amount of time.)

This will help us to remember what has been happening just in the past month (or since it happened) as I ask you these questions.

I'm going to be asking you how your child has been feeling just about (name the event). I'll be sure to mention the amount of time and the event in my questions just so we don't forget.

#### Show the CPSS Pictorial Rating Sheet.

I will read each item. You tell me the number that best describes how often each one has bothered your child IN THE LAST MONTH. You can also answer "Don't Know."

DK	0	1	2	3	4
Don't Know	Not at all	Once a week or less/ a little	2 to 3 times a week/		6 or more times a week/ almost
			somewhat		always

#### Part 1:

1.	Did your child have upsetting thoughts or pictures about the experience that came into their head when they didn't want them to? Did your child have bad dreams or	DK	0	1	2	3	4	
2.	nightmares?	DK	0	1	2	en,	4	
3.	Did your child act or feel like the experience was happening again (seeing or hearing something and feeling as if they were there again)?	DK	0	1	2	693	4	
4.	Did your child feel upset when they were reminded of what happened (for example, feeling scared, angry, sad, guilty, confused)?	DK	0	1	2	65)	4	
5.	Did your child have feelings in their body when they were reminded of what happened (for example, breaking out into a sweat, heart beating fast)?	DK	0	1	2	33	4	
6.	Did your child try not to think about, talk about, or have feelings about the experience?	DK	0	1	2	93	4	
7.	Did your child try to avoid activities, people, or places that reminded them of what happened?	DK	0	1	2	en,	4	

(This is for your agency's purposes only and will not be entered into the CFTSI data system)

0 Not at all

DK.

Don't Know

Generated by the CFTSI REDCap system

4 to 5 times a

week/ a lot

6 or more times

a week/ almost

# The Child PTSD Symptom Scale (CPSS) – 5 Interviewer Version

### Pre-CFTSI CAREGIVER

2 to 3 times a

week/

Once a week or

less/ a little

		Transport of the Control		somewhat					arting a rot	always
		_								
8.	Did your child have troul important part of the exp	erience?	DK	0	1	2	3	4		
9.	Did your child have bad t themselves, other people, example, "I can't do anyt people are bad", "The w place")?	or the world (for hing right", "All	DK	0	1	2	3	4		
10.	Did your child feel like w their fault (for example, " known better", "I should that")?	I should have n't have done	DK.	0	1	2	3	4		
11.	Did your child have stron feelings like fear, anger,	guilt, or shame?	DK.	0	1	2	3	4		
12.	Did your child have mucl doing things they used to	like?	DK.	0	1	2	3	4		
13.	Did your child have troub people? Did your child fe want to be around other p	el like they didn't eople?	DK	0	1	2	3	4		
14.	Did your child have troub feelings (like happiness of	r love)?	DK.	0	1	2	3	4		
15.	Did your child get angry yelling, hitting others, th	rowing things)?	DK.	0	1	2	3	4		
16.	Did your child do anythir themselves (for example, running away)?	taking drugs,	DK	0	1	2	3	4		
17.	Was your child very care lookout (for example, cho is around them and what	ecking to see who is around them)?	DK	0	1	2	3	4		
18.	Was your child jumpy or (for example, when some behind them, when they l	one walks up near a loud noise)?	DK	0	1	2	3	4		
19.	Did your child have troub (for example, losing track forgetting what they read attention in class)?	of a story on TV, unable to pay	DK	0	1	2	3	4		
20.	Did your child have troul staying asleep?	ole falling or	DK	0	1	2	3	4		

Child's Name	CFTSI ID
This is for your geomet's purposes only and will not be entered into the CFTSI data extent	Generated by the CFTSI RED Can region

# The Child PTSD Symptom Scale (CPSS) – 5 Interviewer Version Pre-CFTSI CAREGIVER

Part 2: Have these symptoms been interfering with your child's everyday life?

21.	Doing their prayers	Yes	No	
22.	Chores and duties at home	Yes	No	
23.	Relationships with friends	Yes	No	
24.	Fun and hobby activities	Yes	No	
25.	Schoolwork	Yes	No	
26.	Relationships with their family	Yes	No	
27.	General happiness with their life	Yes	No	