Examining Levels of Posttraumatic Stress Disorder Symptoms and Treatment Attendance amongst Children Living in Different Caregiver Settings

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EXAMINING LEVELS OF POSTTRAUMATIC STRESS DISORDER SYMPTOMS
AND TREATMENT ATTENDANCE
AMONGST CHILDREN LIVING IN DIFFERENT CAREGIVER SETTINGS

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Doctor of Psychology

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Dissertation Approval

This is to certify that the thesis presented to us by Danika Perry on the 21 day of May, 2013, in partial fulfillment of the requirements for the degree of Doctor of Psychology, has been examined and is acceptable in both scholarship and literary quality.

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Abstract

This study examined symptoms of posttraumatic stress disorder (PTSD) and treatment attendance rates amongst a sample of children and adolescents who engaged in treatment for PTSD. The purpose was to determine if there was a difference in the level of PTSD symptoms or the number of sessions attended between those children living in foster care and those living with their primary non-foster caregiver(s). In addition, the treatment attendance rates of foster care children were examined to determine if there was a relationship between the level of the PTSD symptoms and the child’s treatment attendance rates. Results revealed that there was no significant difference in the specific domains or total posttraumatic symptomology between children living in foster care and children living in the non-foster caregiver setting. Furthermore, there was no significant difference in treatment attendance between the two groups and no significant relationship between treatment attendance amongst foster care children and their PTSD symptoms at 6 months after they began treatment. Limitations and implications are discussed.
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Chapter 1

Introduction

Statement of the Problem

On a daily basis, children in the United States are exposed to various forms of trauma. In 2011, the U.S. Child Protection Service received 3.4 million reports of child abuse involving approximately 6.2 million children; 681,000 unique child cases resulted in proof of abuse (United States Department of Health and Human Services [U.S. DHHS], 2012). Ford, Elhai, Connor, and Frueh (2010) noted that two of every three adolescents report having been victimized through witnessing domestic violence, community violence, physical abuse, sexual assault (Cohen, Mannarino & Deblinger, 2006; Vickerman & Margolin, 2007), natural disasters, or tragic loss of life (Cohen et al., 2006; Ford et al., 2010). Statistics regarding the various forms of abuse suggest that 65% of children experience neglect, 18% report physical abuse, and 10% experience sexual abuse, while the lowest occurrence of abuse involves mental (psychological) abuse at 7% (United States Department of Veterans Affairs [U.S. DVA], 2012). In addition, of the 3 to 10 million children who witness family violence annually, 40 to 60% of those cases involve physical abuse of the child; the aforementioned statistics do not take into account the estimated two thirds of cases involving child abuse that go unreported (U.S. DVA, 2012). Based upon the statistical data, exposure to a traumatic event is a somewhat common experience amongst children. Furthermore, traumatic exposure can cause youth to be at risk for other negative effects of victimization, including psychological distress, delinquency, substance abuse, and multiple exposures to further trauma (Finkelhor, Ormrod, & Turner 2009; Ford et al., 2010).
Overall, the experience of one traumatic incident amongst girls and boys is relatively similar in 15 to 43% of girls and 14 to 43% boys (U.S. DVA, 2012). Traumatic events are often unpredictable, uncontrollable, and very dangerous, and may result in Posttraumatic Stress Disorder (PTSD; Carr, 2004). The development of PTSD occurs in 3-15% of girls and 1-6% of boys (U.S. DVA, 2012). The impact of PTSD on the lives of children can result in impaired psychosocial functioning, including poor affect regulation in the form of avoidance, compromised cognitive functioning (Ford et al., 2010), distressing re-experiences of the traumatic event, and increased arousal (APA, 2000; Carr, 2004). The associated symptoms and the victim’s appraisal of the world, him or herself, and the future often result in a sense of uncertainty and instability. Therefore, the caregiving environment is critical in creating a sense of stability and safety.

On September 30, 2011, approximately 400,540 children were in the United States Child Welfare system (Child Welfare Information Gateway, 2013). These staggering numbers suggest that there is a vast need for foster care. Based upon the self-report of children in foster care, a span of time is often required for them to fully adjust to their new environments (Mitchell, Kuczynski, Tubbs, & Ross, 2010). This adjustment period often results in an increase of uncertainty. Although, it should not be assumed that the caregiving setting with the family of origin is an inherently completely stable environment, there may be more elements of perceived stability when compared to a foster care setting. The importance of a stable caregiving environment cannot overshadow the importance of treatment for children with PTSD (Cohen et al., 2006; Grasso et al., 2009). Factors related to symptoms of PTSD and/or the caregiver setting
have been suggested to influence treatment attendance (Koverola, Murtaugh, Connors, Reeves, & Papas, 2007).

**Purpose of the Study**

This study expounds on the current literature to determine if the caregiver setting, that is, foster care versus the primary non-foster caregiver setting, is associated with a difference in the child’s level of PTSD symptoms prior to the beginning of treatment. The primary non-foster caregiver setting refers to a home where the child lives with a biological or adoptive parent. Hence, the PTSD symptoms of children living in both foster care and non-foster care settings were examined in order to determine if the child’s caregiving environment played a role in the level of the child’s symptomatology. Furthermore, this study aimed to determine if the child’s caregiving setting played a role in treatment attendance. Therefore, the total number of sessions attended for children living with foster caregivers was compared with the number attended for children living with non-foster caregivers. An additional objective of this study was to determine if there is a relationship between the level of PTSD symptoms amongst children living in foster care and their treatment attendance. Therefore, the total number of sessions attended and the total PTSD symptom severity score were assessed amongst children living in foster care.
Chapter 2

Literature Review

**Theoretical basis of PTSD.** Throughout history, various theories anchored in psychological knowledge have been proposed to explain the development and maintenance of PTSD. The early theories include the social-cognitive theory, shattered assumptions theory, conditioning theory, information-processing theory, and anxious-apprehension model (Brewin & Holmes, 2003). In addition, more current theories include the emotional-processing theory (Foa & Riggs, 1993; Foa & Rothbaum, 1998), dual-representation theory (Brewin, 2001; Brewin, Dalgleish, & Joseph, 1996) and Ehlers and Clark (2000) cognitive theory. These various theories, described in the following sections, help to explain why some individuals do not recover naturally from the symptoms of PTSD following a traumatic experience (Cahill & Foa, 2007).

**Social-cognitive theory.** Horowitz’s stress response theory of PTSD is an integration of psychoanalytic theory and concepts of information processing (Cahill & Foa, 2007) and has been referred to as the social-cognitive theory because of his emphasis on one’s emotions and belief system subsequent to a traumatic event (Brewin et al., 1996). Horowitz (1976, 1986) suggested that when one is initially exposed to a traumatic event, one’s reaction involves an intense affective response. In addition, the individual attempts to assimilate information attained from the trauma with knowledge from his or her previous learning history or inner model (Horowitz, 1986). The inner models are strengthened when the new information matches; however, if the information is incongruent, “alterations of inner [the] working model and plans for adaptive actions...
are accomplished” (p. 96). Individuals in this stage are often overwhelmed by their inability to integrate this new information. Therefore, intrusions and reexperiencing symptoms interrupt their consciousness through flashbacks and nightmares because of the fundamental psychological need to resolve the new information with the existing inner models. The process is known as the “completion tendency” (Horowitz, 1986). In the event that the traumatic information is overwhelming and incongruent, the individual develops psychological defense mechanisms to help avoid memories of the trauma while filtering the amount of information that is recalled. Consequently, the avoidance tendency competes with the completion tendency, and symptoms of avoidance (emotionally numbness, denial) result. The individual oscillates between suppressing (avoiding) and promoting (reexperiencing) trauma-related information, and the process culminates once the new information is reconciled with older memories. Horowitz’s model (1986) suggests that the discrepancy between the trauma-related information and the inner models is unable to be resolved as a result of symptoms of avoidance, thereby maintaining posttraumatic psychopathology.

**Shattered assumptions theory.** Similar to the process of integrating new information into an existing schema, Epstein (1991) suggested that every individual has four core beliefs, which are altered subsequent to a traumatic event. These core beliefs are that the world is safe, the world is significant, the self has value, and others are trustworthy. Likewise, Janoff-Bulman (1992) suggested that individuals attempt to resolve traumatic experiences through a process of schematic change. Janoff-Bulman (1992) condensed Epstein’s four core beliefs by proposing that people have three common assumptions that may influence their response to a traumatic experience. These
assumptions are that the world is safe, the world is significant, and the self has value. Life circumstances have the potential to be appraised as traumatic if they “shatter” those deeply held assumptions (Janoff-Bulman, 1992). As a result, the individual may attempt to assimilate information from the traumatic event into the core assumptions, or these assumptions can be reconstructed spontaneously. The core assumptions are modified through the reexperiencing and avoidance cycle of symptoms or deliberately through reflection of the traumatic experience, resulting in accommodation of the traumatic information. For instance, if a victim of sexual abuse ascribes his or her own behavior as being the reason for the abuse, the individual is attempting to maintain the core pre-trauma assumptions, whereas if the individual changes the core assumptions, accommodation of the event occurs. The theory of shattered assumptions explains three important processes: (a) common themes are identified in schematic change, (b) one’s role in social and interpersonal contexts are specified with regard to the process of facilitating or blocking schematic change, and (c) the potential of positive reframing and posttraumatic growth is emphasized (Brewin & Holmes, 2003).

Similar to Janoff-Bulman’s (1992) model of shattered assumptions, Bolton and Hill (1996) have also proposed that people have core beliefs or assumptions regarding self and the world. These beliefs may involve content such as one is capable of caring for one’s needs, the world is predictable, and the world offers provisions for one’s needs (Bolton & Hill, 1996). These beliefs are centered on the notions that the individual is competent and that the world is a safe and supportive environment. Traumatic incidents are in stark contrast to such beliefs, as they occur unexpectedly and are unpredictable, resulting in intense feelings of helplessness and fear (Bolton & Hill, 1996). This shock to
one’s core beliefs begins to compete with existing schema, resulting in feelings of unreality caused by one’s inability to integrate the traumatic experience into the belief system about the self and the world. The theory of shattered assumptions suggests that individuals with the illusory protective beliefs about the world would have the most upsetting reaction to a traumatic event. Although this notion has not been supported in the research, individuals with a prior history of traumatic exposure demonstrate a greater risk for developing PTSD (Brewin, Andrews, & Rose, 2000; Resick, 2001). Bolton and Hill (1996) suggested that the individual may attempt to cope with such cognitive dissonance by engaging in dreams or third-person memories of the event with no expressed affect. Some individuals may recall the traumatic event as unreal or mentally block emotionally distressing memories (Bolton & Hill, 1996). In doing so, these individuals are able to acknowledge that the event did happen while at the same time diminish their emotional reaction, thereby negating the occurrence of the event and resulting in competing beliefs and overall avoidance. On the other hand, some individuals tend to alternately accept and deny the occurrence of the event at different times, resulting in episodic reexperiencing, alternating with denial (Bolton & Hill, 1996).

**Conditioning theory.** The application of the conditioning theory in explaining the etiology of PTSD was developed from Mowrer’s (1960) two-factor learning theory (Keane, Zimering, & Caddell, 1985). The conditioning theory proposes that neutral stimuli present during the traumatic event can directly arouse the fear response through the process of classical conditioning. Extinction of the fear response with associated stimuli occurs with repeated exposure to the traumatic memories, although one’s attempt to avoid the traumatic memories through distraction or blocking of memories hinders the
exposure extinction process (Keane et al., 1985). In the latter circumstance, the fear
response is reduced, and becomes a reinforced process that facilitates the maintenance of
PTSD (Keane et al., 1985).

Mowrer’s (1960) two-factor theory was also utilized by various PTSD researchers
(e.g., Becker, Skinner, Abel, Axelrod, and Chichon, 1984; Kilpatrick, Veronen, & Best,
1985) to explain the reactions of rape victims. Although the two-factor theory has a
parsimonious explanation, Becker et al., (1984) suggested that rape victims develop
persistent sexual problems because the sexual activities associated with the rape were
conditioned to stimulate fear and anxiety. As a result, generalization occurs, thereby
eliciting fear from other sexually related activities. Therefore, these individuals tend to
avoid sexual activities and inhibit their sexual feelings such that they can avoid the
discomfort of fear and anxiety. Similarly, Kilpatrick et al. (1985) suggested that through
the process of classical conditioning, survivors of sexual assault experience fear elicited
by stimuli associated with the traumatic event. Furthermore, the processes of stimulus
generalization and second-order conditioning have been proposed to explain the
survivor’s evoked response anxiety from a variety of stimuli. Some of the cues are
common, while others are idiosyncratic and dependent upon characteristics of the rape
(Kilpatrick et al., 1985).

**Information-processing theory.** Information-processing theories are also
considered cognitive theories in that the traumatic event is suggested to be integrated into
one’s memory, and there is less focus on personal and social contexts (Chemtob, Roitblat,
Hamada, Carlson, & Twentyman, 1988; Creamer, Burgess, & Pattison, 1992; Foa,
Steketee, & Rothbaum, 1989; Litz & Keane, 1989). There is an inherent need for the
traumatic memory to be integrated into one’s existing belief symptom; however, if characteristics of the memory prevent it from being appropriately processed, psychopathology will develop (Brewin & Holmes, 2003).

Lang (1979) proposed that interconnections between nodes in the brain form an associative fear network based upon the memory of the traumatic event. This network is comprised of stimulus information associated with the traumatic event; affective information, including emotions and physiological reactions to the event; and meaningful information based upon the perceived degree of threat (Lang, 1979). In this model, the integration of cognitions and affects responses form a coping response system that serves to help the individual escape or avoid danger. When this response system is activated in individuals with an anxiety disorder, their fear memories are easily activated by environmental stimuli, and physiological responses and judgments similar to the original memory result.

Chemtob et al. (1988) suggested that the symptoms of hyperarousal and persistent reexperiencing in response to the traumatic event were adaptive at the time of the event, and since that time, the fear network is permanently activated, thereby operating in “survival mode.” Foa et al. (1989) proposed that individuals with PTSD develop a fear network based upon associations with the traumatic event that has an astounding significance in their memory structure, thus defying previously held beliefs about safety. Therefore, situations that may have been previously associated with neutral or positive mood states are replaced with stronger interconnections, including behavioral and physiological responses, such as hypervigilance, reexperiencing, and avoidance, which are selectively activated in the fear network. Foa et al. (1989) suggested that the fear
network has a low threshold in which many environmental stimuli can activate the network. In order to weaken the strong associations in the fear network, the fear network has to be activated through imaginal or in vivo exposure, thereby integrating the event into one’s existing memories (Foa et al., 1989). When exposure is difficult or insurmountable, the symptoms of PTSD are persistent and maintained.

**Anxious-apprehension model.** The anxious-apprehension model, originally developed by Jones and Barlow (1990), suggests that the development and maintenance of PTSD are very similar to the variables involved in panic disorder. Panic attacks and traumatic flashbacks demonstrate evident similarities. During panic attacks, individuals experience physiological symptoms that are represented as emotional alarms. Cognitive attributions are made about these emotional alarms, which signal danger, thereby leading to a cyclical pattern. During a traumatic experience, the alarm is legitimate and significant, although the alarms may signal subsequently in the absence of a traumatic experience (Barlow, 1988). When one experiences a traumatic flashback, a similar alarm is produced, resulting in a negative attribution, which creates a cycle of anxious apprehension. The anxious apprehension is focused on cognitive and physiological cues stemming from the traumatic event, as the individual desires to avoid the distressing experience of the alarm. As a result, individuals who develop PTSD experience hypervigilance in which their attention is centered upon their emotional alarms and the associated stimuli, even when there is no real danger (Barlow, 1988). The outcome is a negative feedback loop that maintains the reexperiencing symptoms. In addition, the individual often learns to prevent the alarms from being triggered by engaging in avoidance of emotions and traumatic reminders.
The aforementioned theories and models of PTSD, although different in their approaches toward describing the etiology of PTSD, help to develop a clinical conceptualization of how PTSD presents in those who are not able to process traumatic situations effectively. Furthermore, these theories demonstrate the function of the three classical symptoms of PTSD including avoidance, reexperiencing, and hyperarousal, as recapitulated in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; American Psychiatric Association, 2000).

**Clinical features of PTSD.** PTSD is operationalized in the *DSM-IV-TR* (2000) as three symptom domains, including reexperiencing, avoidance or emotional numbness, and hyperarousal (Carr, 2004; Palm, Strong, & MacPherson, 2009). Diagnosis of PTSD requires a specific number of symptoms from each of the three domains; therefore, absence of domain-specific symptoms precludes diagnosis of PTSD (Palm et al., 2009). The three symptom domains do not contribute equally to the diagnosis of PTSD, but in fact, the number of symptoms in each domain differs (Palm et al., 2009). Therefore, the number of symptoms from each domain necessary to meet criteria for PTSD differs as well (Palm et al., 2009).

**Symptoms of PTSD.** According to the American Psychiatric Association (APA, 2000), during the course of traumatic events, children may feel trapped, horrified, helpless, and overwhelmed with fear. Individuals diagnosed with PTSD are often subject to intrusive and recurrent recollections of the event in the form of images, thoughts, perceptions, dreams, flashbacks, illusions, or hallucinations (APA, 2000). Furthermore, they may also experience psychological distress and/or physiological reactivity when exposed to a cue that may trigger a memory of the traumatic event (APA, 2000). Owing
to the distressing nature of such symptoms, some individuals may avoid memories of the trauma, detach from others, and exhibit restricted affect (APA, 2000). In addition, avoidant behaviors may include regression in developmentally acquired skills, such as language and toileting, or a loss of interest in play in very young children (Carr, 2004). The desire to avoid traumatic reminders may result in substance abuse amongst adolescents. Moreover, many adolescents do not expect to live long enough to reach maturity in order to fulfill lifelong goals (Carr, 2004). Other symptoms common to this population include difficulty focusing, irregular sleep patterns, limited impulse control, hypervigilance, and an overly sensitive startle response (APA, 2000). Nevertheless, Cohen et al. (2006) noted that exposure to traumatic events does not always result in prolonged traumatic symptoms; instead, the child’s coping style, level of resiliency, and sources of support may play a major role.

Research has shown that the development of PTSD can negatively influence the child’s interactions with others especially if left untreated (Carr, 2004). Children who have undergone traumatic experiences often develop schemas with core beliefs that they are vulnerable in an unsafe world, and as a result, they relate with others, in a self-protective manner (Carr, 2004). The developed schema helps to explain the tendency of children diagnosed with PTSD to overly attend to the facial expressions of others marked by anger or negative affect over any other facially expressed emotion (Pollak, 1998; Pollak, Klorman, Thatcher, & Cicchetti, 2001). This heightened pattern of affective sensitivity may be adaptive in helping children to avoid dangerous situations, but it may be maladaptive in less threatening environments, such as when a passerby may display a scowl because of his or her own emotional distress, yet has no intention of harming the
child (Pollak, 1998). If the child were to react aggressively towards a foster parent, negative life consequences could result.

**Prevalence of PTSD.** As indicated by Gradus (2007), prevalence statistics of PTSD among youth are limited because of the lack of a current population-based epidemiological study or meta-analysis. However, Kessler et al. (2005) noted that the lifetime prevalence of PTSD in Americans is an estimated 6.8%. In school samples, studies have shown that between 40 and nearly 70% of children have been exposed to a traumatic event (Giaconia et al., 1995; Jenkins & Bell, 1994). In a hospital sample, 93% of adolescent patients reported exposure to traumatic events (Lipschitz, Winegar, Hartnvk, Foote, & Southwick, 1999). Cohen, Berliner, and Mannarino (2010) conducted a study in which they noted that more than half of American youth have been exposed to a traumatic event. Roughly 20 years ago, researchers studied the lifetime prevalence of PTSD in young adults living in an urban population (Breslau, Davis, Andreski, & Peterson, 1991). Of the 1,007 participants, 39.1% reported exposure to a traumatic event at some point in their lifetimes (Breslau et al., 1991). Of those who reported exposure to a traumatic event, 23.6% met *DSM-IV* (1994) criteria for PTSD, resulting in a lifetime prevalence rate of 9.2% for the entire sample (Breslau et al., 1991). Similarly, child and adolescent participants ages 9, 11, and 13 years at intake were a part of a general community sample of 1,420 participants. In this longitudinal study, more than two thirds of the sample (68%) reported exposure to a traumatic event by the age of 16 years (Copeland, Keeler, Angold & Costello, 2007). The prevalence rate for the development of PTSD was 13.4%, while less than 0.5% met *DSM-IV* (1994) criteria for PTSD (Copeland et al., 2007). Some of the other problems experienced by 20% of the
community sample included school difficulties, emotional difficulties, and physical problems. Although the two studies are not designed equivocally, the prevalence of PTSD and other problematic symptoms overall was much lower in the general community sample when compared to that in the urban population. Therefore, factors such as racial background and socioeconomic status may increase the risk for trauma exposure, while living in an urban low-income environment increases the likelihood of exposure to traumatic experiences in the form of community violence (Bell & Jenkins, 1993; Koop & Lundberg, 1992; Schubiner, Scott, & Tzelepis, 1993; Schwab-Stone, Ayers, Kasprow, & Voyce, 1995).

**Ethnicity, race, and socioeconomic status.** Several studies have evaluated the prevalence of various types of trauma exposure among children and adolescent populations (Fairbank & Fairbank, 2009). Unfortunately, the literature lacks a nationally based epidemiological analysis of the prevalence of PTSD among youth (Gradus, 2007) especially stratified by demographic factors (Centers for Disease Control and Prevention, [CDC], 2010). Dyregrov and Yule (2006) supported this notion by suggesting that the prevalence of PTSD based upon ethnicity is even sparser. In an early study, Cuffe et al. (1998) found that African Americans reported more traumatic exposure than did their Caucasian counterparts. Upon comparison to the demographic information from the Adverse Childhood Experiences (ACES) study, African Americans had the smallest sample size and demonstrated the lowest incidence of exposure to traumatic events (CDC, 2010). The data collected for the ACES study were utilized to help explain data from an adult population who experienced adverse childhood experiences, some of which included parental substance abuse, physical abuse, sexual abuse, emotional abuse,
neglect, and domestic violence. When compared to the Caucasian respondents, the Hispanic population demonstrated a higher prevalence rate of witnessing domestic violence at 21.7% and experiencing physical abuse at a rate of 19.8% (CDC, 2010). Violent events impact all sociodemographic groups, but urban, poor, minority communities apparently are the most vulnerable and most likely to witness community violence (Bell & Jenkins, 1993; Koop & Lundberg, 1992; Schubiner et al., 1993; Schwab-Stone et al., 1995).

**Gender and age.** With regard to gender, men are apparently more likely than women to experience traumatic events while women are more likely than men to develop PTSD (Cuffe et al., 1998; Kessler et al., 2005). The gender based prevalence rates are consistent throughout the lifespan (Breslau et al., 1991; Cuffe et al., 1998). According to the U.S. DVA (2007), an estimated 15 to 43% of girls and 14 to 43% of boys have experienced at least one traumatic event during their childhood. From those who had been exposed to a traumatic event, an estimated 3% to 15% of girls and 1% to 6% of boys met full *DSM-IV* (1994) criteria for PTSD (U.S. DVA, 2007).

In the National Comorbidity Study – Adolescent Supplement, a sample of more than 10,000 adolescents between the ages of 13 to 18 years, indicated that 5% had a lifetime prevalence of developing PTSD (Merikangas et al., 2010). Data from the National Survey of 4,023 Adolescents between the ages of 12 and 17 years, suggest that 3.7% of boys met *DSM-IV* (1994) criteria for PTSD while the prevalence rate for girls was higher at 6.3% (Kilpatrick et al., 2003). With regard to the potential link between one’s age and the development of PTSD, Foy, Madvig, Pynoos, and Camilleri (1996) performed a meta-analysis of 25 studies examining PTSD in children. The relationship
between age and PTSD or the severity of PTSD was examined, and in the majority of the studies, the results were nonsignificant or inconclusive (Foy et al., 1996). Findings from those studies were mixed, and thus two methodological considerations were made. The first consideration noted that the studies involved large sample sizes as well as a wide range of developmental stages from childhood to adolescence. The second consideration suggested that the relationship between age and distress may not be a linear correlation and thus may involve a more complex interaction (Foy et al., 1996).

**Protective and Vulnerability Factors.** The U.S. DVA (2012) suggests that the development of PTSD is related to the type of traumatic event and the intensity of exposure. Empirical research based upon the development of PTSD in children and adolescents is dated, although the findings of Foy et al. (1996) appear to be relevant in the 21st century (U.S. DVA, 2012). In 1992, Foy, Osato, Houskamp, and Neumann presented a PTSD Etiological Hypothesis to explain the interaction of environmental and individual factors that may develop into PTSD in children and adolescents. In this model, a chain of events has been suggested to lead to PTSD (Foy et al., 1992). The chain commences with exposure to a traumatic event, which places one at risk. Exposure is immediately followed by the critical link of one’s physiological reaction, thereby resulting in acute distress. The development of PTSD is dependent upon mediating variables from three domains: biological, psychological, and social. This interactive model is advantageous in examining dose-response relationships for the development of PTSD in children as it helps to account for resiliency factors that prevent the development of PTSD, while some vulnerability factors increase one’s risk for developing PTSD during childhood. In addition, an independent causal relationship may
exist in which factors such as prior trauma exposure may independently produce distress
in a cumulative manner leading to the onset of PTSD. The third type of interacting
relationship is the potentiation relationship in which the independent causal factor
interacts with the mediating variable (vulnerability factor), thereby contributing to the
development of PTSD. Some factors, such as low socioeconomic status, may act
indirectly because risk for trauma exposure is increased in poor urban environments.

Variables, such as the severity of trauma exposure, posttrauma latency, and
parental distress related to the trauma, have consistently shown significant relationships
with posttraumatic symptoms or the development of PTSD (Foy et al., 1996). The risk
for developing PTSD during childhood was positively correlated with severity of trauma
exposure and parental trauma-related distress; the more severe the trauma exposure or the
more significant the parental distress, the greater the likelihood of childhood PTSD (Foy
et al., 1996). On the other hand, in more than 60% of the studies, there was a negative
correlation between the length of time since the traumatic event and PTSD severity,
therefore the longer the time since the traumatic event, the less the severity of PTSD.
The relationship between the trauma-related distress placed upon parents and the risk for
developing PTSD in children is unique to childhood PTSD. Interestingly, parental
support and lower levels of posttrauma parental distress have been suggested to be
protective factors decreasing the incidence of childhood PTSD (U.S. DVA, 2012).

The likelihood of developing PTSD based upon types of traumatic events seems
to support the notion that the development of PTSD may be based upon one’s subjective
experience (i.e., belief system or perspective). In a study analyzing types of traumatic
events and the development of PTSD, Rohini et al. (2009) noted that physical abuse,
sexual abuse, domestic violence, and learning traumatic news were significantly associated with the development of PTSD in a sample of 157 children. Research findings gathered by Rohini et al. (2009) did not demonstrate a significant relationship between the development of PTSD following exposure to a natural disaster or crime (Rohini et al., 2009). Therefore, the risk of developing PTSD seems to be linked to the type of event, which is an environmental or objective factor. Given the risk factors for developing PTSD during childhood, evidenced-based assessments must be implemented in order to diagnose accurately the child’s symptoms, the duration of the symptoms, and the level of distress.

**Assessment of PTSD.** Effective assessment of trauma exposure and any clinically significant posttraumatic symptoms helps to guide the child’s treatment plan. Cohen et al. (2010) suggested that routine assessment of trauma exposure and the child’s response to the traumatic event(s) during the intake session should become the standard of care in mental-health treatment. One of the foundational aspects of PTSD assessment is determining if the child has been exposed to a traumatic event and if so, the number of traumatic events to which the child has been exposed. The gold standard in the assessment of symptoms resulting from trauma exposure in children is a semistructured standardized interview, although the amount of time necessary to complete the interview is not practical in a community mental-health setting (Cohen et al., 2010). Self-report measures require less time to complete and are valid methods of identifying symptoms of PTSD and depression. The Child PTSD Symptom Scale (Foa, Johnson, Feeny, & Treadwell, 2001) and the UCLA PTSD Reaction Index for *DSM-IV, Revision 1* (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998; Steinberg, Brymer, Decker, & Pynoos,
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2004) are the two most widely used self-report assessment instruments designed for trauma-exposed youth. In addition, parent versions are available (Cohen et al., 2010). For the purpose of this study, the UCLA PTSD Index for DSM-IV, Revision 1 (UPID) and the Abbreviated version, the UPID-A (Pynoos et al., 1998) were utilized.

**PTSD and instability.** The symptoms associated with PTSD and their impact upon one’s life seem to imply the need for a stable environment (Grasso et al., 2009). In some instances, the traumatic incidents may be so dangerous that the child may be removed from the primary caregiving setting (non-foster care) and placed in state custody (or foster care). The foster care setting is beneficial in that it is expected to limit the child’s exposure to further traumatization by removing the child from the abusive household, thereby reinstating safety and stability. Yet, all child victimization experiences do not result in the child’s removal from the original family setting. Consider an adolescent who witnessed a drive-by shooting or a child who had been sexually abused by a perpetrator who does not reside in the home. In these instances, the non-foster care setting may be perceived as an unsafe and unstable environment, although the child’s traumatic experience does not warrant removal from the non-foster care home. Inasmuch, the youth’s coping ability may be compounded by the environmental reminders of the traumatic experience and/or the parent’s response to the child’s needs subsequent to the trauma (Cohen et al., 2006; Schechter et al., 2010).

**Foster care.** Foster care is a child welfare service that provides temporary placement to children whose parents are incapable of or unwilling to provide appropriate care (Dorsey et al., 2008). In order for a child to be removed from his or her non-foster caregiver setting to a foster care home, evidence of maltreatment in the form of sexual
abuse, physical abuse, or neglect must be substantiated (Pew Commission on Children in Foster Care, 2003).

**Child maltreatment.** Child maltreatment includes child abuse and neglect, although no definition for child maltreatment is universally accepted because there are several stakeholders have developed definitions for various purposes (U.S. DHHS, 2003). According to federal law, the Child Abuse Prevention and Treatment Act (CAPTA) defines child abuse and neglect as follows:

> any recent act or failure to act on the part of a parent or caretaker that results in death, serious physical or emotional harm, sexual abuse, or exploitation, or an act or failure to act that present an imminent risk of serious harm. (U.S. DHHS, 2003, p. 13)

No definition for child maltreatment is nationally agreed upon, although four subtypes of maltreatment have been proposed: (a) physical abuse, (b) sexual abuse, (c) neglect, (d) emotional abuse, (e) substance abuse (U.S. DHHS, 2003). In general, physical abuse involves a purposeful act initiated by the child’s caretaker that results in physical injury. Physical discipline is considered acceptable, in the event that it is within reason and does not cause bodily injury to the child (U.S. DHHS, 2003). Sexual abuse, which is recognized as a common form of child maltreatment, is specifically defined by CAPTA as a situation in which the caregiver exploits, persuades, or coerces a child to participate in any sexually explicit act or simulation of such conduct through visual media (U.S. DHHS, 2003). Sexual abuse may also include rape, statutory rape, molestation, incest, or sexual exploitation of children (U.S. DHHS, 2003). Neglect is broadly defined and can be subdivided into four different types: (a) physical, (b) medical,
(c) emotional, or (d) educational. First, physical neglect refers to the caregiver’s failure to provide supervision, shelter, or food to a child. Abandonment is a form of neglect that is also connected with emotional abuse, to be discussed later. Medical neglect involves a failure to provide recommended medical or mental-health treatment to a child. Medical neglect may result from cultural or religious beliefs or lack of resources, but if recommendations are made and resources are provided, and the caregiver does not follow through the behavior is considered neglectful behavior. Emotional neglect seems to be closely related to medical neglect in that it results from a caregiver’s failure to respond appropriately to a child’s emotional needs. Emotional neglect also occurs when permission is granted by the caregiver for the child to abuse addictive substances. Lastly, educational neglect results from a caregiver’s failure to provide an appropriate education to a child or failure to attend to specialized educational needs for the child (U.S. DHHS, 2003).

The last two areas of child maltreatment include emotional abuse and substance abuse. Emotional abuse, also known as psychological abuse, involves impairment of the child’s emotional well-being resulting from the caregiver’s consistent negative behavioral pattern. This form of abuse can be the most difficult to detect in a child without evidence of physical harm or mental impairment. Substance abuse of a child can occur in several forms. If a mother uses an illegal or mind-altering substance during her pregnancy or if the caregiver uses a controlled substance that impairs his or her ability to supervise the child appropriately, these actions are considered substance abuse. Substance abuse can also include the exploitation of a child by having a child sell or distribute illegal drugs. If a caregiver engages in the manufacturing of methamphetamine in the presence of a child
or if the parent offers the child illegal drugs or alcohol, these actions are considered substance abuse also.

Although various forms of child maltreatment exist, referrals for mental-health services are more often made for children who have experienced physical or sexual abuse as these forms of abuse are apparently more harmful than other forms of maltreatment (Bellamy, Gopalan, & Traube 2010; Garland, Landsverk, Hough, & Ellis-Macleod, 1996; Leslie, Hurlburt, Landsverk, Barth, & Sylmen, 2004). One of the greatest concerns regarding children who have been abused is that they tend to have difficulty with anger management and display rates of oppositional behavior higher than those displayed by nonabused children (Crosson-Tower, 1999; Wolfe, 1999). Negative outcomes seen in children who have been neglected include poor psychosocial functioning, which can have lasting effects into adulthood (Schumacher, Smith Slep, & Heyman, 2001).

These traumatic experiences increase children’s vulnerability for further instability once placed in foster care (Jones Harden, Clyman, Kriebel, & Lyons, 2004). Studies conducted on children placed in foster care have shown poor life outcomes. Specifically, these children show difficulty in developing healthy attachments with caregivers and lasting relationships with peers (Wise & Egger, 2009). Furthermore, children placed in foster care are at an increased risk for developing major physical-health problems, poor mental-health, and developmental delays such as speech, motor skills, and comprehension (Wise & Egger, 2009).

The traumatic experiences of children in foster care and their resulting impact on the lives of these children warrant specified training for their foster caregivers (Dorsey et al., 2008). The rationale for training programs is to educate caregivers on ways to
provide a safe, stable environment for these vulnerable children. The U.S. Children’s Bureau considers training for foster care providers a vital component of ensuring quality care for foster care children (U.S. DHHS, 2006). A report conducted on child welfare outcomes implies variation amongst states in the types of training programs offered and the requirements necessary to become a foster care parent (Grimm, 2003). A portion of the disparity in training requirements can be accounted for by the different types of foster care settings.

**Types of foster care settings.** When a child enters the state child welfare system, several considerations are made regarding the type of out-of-home care setting in which the child will be placed. This decision is largely dependent upon the needs of the child.

**Kinship.** Kinship foster care is encouraged to maintain family connection and stability for the child by placing the child in the care of a biological family member. Kinship placement decisions are often made in an expedient fashion. As a result, kinship caregivers have limited opportunities to prepare and receive formal training targeted at addressing the child’s needs (Christenson & McMurty, 2009; Geen & Berrick, 2002).

**Traditional.** If kinship placement is not feasible, the child is placed in a general non-kinship foster care home. Foster caregivers are expected to support the child’s overall well-being throughout the length of placement. They receive supplemental income from the state for the housing and care that they provide to the child, but they are not directly responsible for ensuring professional treatment of any behavioral, emotional, developmental, and or social difficulties that the child may have (Dorsey et al., 2008). As previously mentioned, the preservice training requirements differ on a state-by-state basis (Grimm, 2003).
**Treatment.** When a child displays emotional and behavioral dysfunction appropriate for the most restrictive form of foster care, treatment foster care may be considered. In contrast to the other forms of foster care, foster parents are an integral component of the child’s treatment, and they are specially trained (Breland-Noble, Farmer, Dubs, Potter, & Burns, 2005) and compensated (Pecora & Maluccio, 2000) to implement strategies outlined in the treatment plan. In essence, the role of the treatment foster care provider is to decrease problematic behaviors and improve prosocial behaviors (Chamberlain, 2002; Dorsey et al., 2008). Therefore, treatment foster care providers are required to receive specialized training to appropriately address the child’s needs before the child is placed in the home.

**Training of the foster care provider.** In addition to the varying training requirements for foster care parents, each state differs in the type of training program that is offered. The Parent Resources for Information, Development, and Education (PRIDE) and the Model Approach to Partnerships in Parenting (MAPP) programs are the two most widely utilized programs (Grimm, 2003). The Child & Family Services (CFS) Reviews have attempted to conduct final reports on the outcomes of these training programs, but the programs lack empirical support (Dorsey et al., 2008; Grimm, 2003). The PRIDE and MAPP programs appropriately address the basic aspects of foster care (e.g., avoiding corporal punishment) and preparation for home licensure (Dorsey et al., 2008). On the other hand, these programs are ineffective in teaching foster parents the necessary skills to care for children with behavioral difficulties, developmental delays, multiple placements, and histories of maltreatment (Dorsey et al., 2008).
The lack of empirical support for the PRIDE and MAPP programs, in addition to the discrepancy in training requirements amongst states, suggests that kinship and non-relative foster care parents do not receive adequate training in caring for children with traumatic backgrounds, and hence the lack of training seems to result in placement instability and high foster parent turn-over rates. Moreover, the purpose of the training programs is to equip foster caregivers with the necessary skills to help children achieve positive exits from foster care. This current limitation of the training programs, may further complicate the overall well-being of these children who enter the child welfare system with problematic backgrounds.

**Living in the new setting.** If the child’s life experiences warrant removal from the traumatic environment, the foster care setting may also be an unstable setting because the duration of the child’s stay is temporary. In addition, the length of the child’s stay may be contingent upon his or her behavior. For example, if a child displays aggression in the form of fighting or defiance of the foster parent, he or she may be removed from the home. In a study conducted on the self-report of children in foster care, several participants had several placements in state custody before finding a suitable environment (Mitchell et al., 2010). The participants generally required a period of time in order to adapt to the new environment (Mitchell et al., 2010).

**Adjustment.** Developing relationships with new parental figures can become quite cumbersome for a child who has been displaced from their home. This challenge seems to lead to an increase in emotional and behavioral problems (Newton, Litrownik, & Landsverk, 2000). A major component of difficulty with adjustment stems from the lack of trust and intimacy that children experience when they enter care after being
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separated from their parents (Morrison, Frank, Holland & Kates, 1999). An identifiable level of mistrust is often displayed by these children in the form of guardedness. Children who have been uprooted from their homes may feel rejected and angry and may grieve the lost relationship with their parent(s) (Marquis, Leschied, Chiodo, & O’Neill, 2008). Often, the life stressors are so intense that children may have difficulty processing their distress in an appropriate manner or they may not feel comfortable doing so. Consequently, a child may demonstrate poor affect regulation, poor social skills and a hindrance in behavioral development; all of which are indicative of maladjustment (Morrison et al., 1999). In a sample of 110 child welfare cases, researchers found that physically maltreated children displayed more difficulty in adjusting to foster care when compared to neglected children (Marquis et al., 2008). This physically maltreated group of children required more level-of-care modifications and exhibited higher rates of behavioral problems than did neglected children (Marquis et al., 2008). Maladjustment to the foster care setting often results in multiple placements (Redding, Fried, & Britner, 2000). Researchers have suggested that placement instability is a risk factor for further changes in placement (Bellamy et al., 2010; Sallnäs, Vinnerljung, & Khyle Westermark, 2004). As a result, foster care providers are encouraged to be mindful and sensitive of such concerns in order to help the child adjust appropriately to the new setting (Howes, 1999). Several longitudinal studies have demonstrated that the poor life outcomes seen in foster care children are associated with their traumatic histories. In addition, foster care children have difficulty regulating their emotions and behaviors, as well as developing healthy attachments with their caregivers.
Attachment. Parent-child relationships are integral to child development and can serve as a model for future relationships that the child will develop (Andersson, 2005). Children who experience maltreatment or neglect at the hand of a parent often develop maladaptive attachments with their parents. The classical conceptualization of attachment styles includes: (a) secure attachment, (b) avoidant attachment (c) ambivalent attachment, and (d) disorganized-insecure attachment (Ainsworth, Blehar, Waters, & Wall, 1978; Main & Solomon, 1986). Child maltreatment is most commonly associated with the disorganized-insecure attachment (Baer & Martinez, 2006). Despite the poor care that these children receive, they acclimate themselves to these harsh conditions in order to survive. When the child welfare system intervenes, these children are abruptly removed from their non-foster caregiver settings. They then have to readjust to a new caregiver about whom they have no prior knowledge.

When children are displaced from their regular home care settings, his or her resources change drastically. The foster caregiver can become one of the most important adult resources in the child’s life (Rhodes, Orme, & Buehler, 2001). For this reason, the relationship dynamic that develops between the child and the foster care provider is crucial. Studies suggest that physical maltreatment and/or neglect coupled with the disruption in care predisposes the child to have difficulty with developing a healthy attachment with the foster care provider (Marquis et al., 2008; Morrison et al., 1999). The challenge of developing a healthy caregiver attachment seems to results from the child’s inability to develop a nurturing and predictable relationship with the caregiver, especially considering the temporary context of foster care.
PTSD amongst children in foster care. Despite the noted high risk of developing PTSD and/or other impairments, Grasso et al. (2009) have suggested that PTSD is often underdiagnosed in children living in foster care. The notion of underdiagnosis seems to imply that PTSD is much more prevalent amongst the foster care population than is statistically represented. This problem was found to result from a lack of child abuse reports by mental-health professionals for children who had been exposed to life-threatening situations or traumatic events while living with a foster caregiver (Grasso et al., 2009). In order to help these children receive the services that they need, Grasso et al. (2009) responded to this problem by encouraging an increase in communication between child welfare programs and mental-health professionals, highlighting the need for mental-health treatment.

PTSD and treatment. In general, children with histories of maltreatment are an apparent population at risk (Bruskas, 2008). Studies have shown that children who have been maltreated demonstrate greater behavioral problems (Bellamy et al., 2010; Burns et al., 2004) and utilize mental-health services far more often than do youth in the general population (Bellamy et al., 2010; Farmer et al., 2001; Halfon, Berkowitz, & Klee, 1992; Harman, Childs, & Kelleher, 2000). Treatment use refers to a patient being engaged in mental-health treatment, either therapy or counseling, by attending the treatment sessions (Harman et al., 2000). Approximately 50% of children in treatment at community mental health agencies are brought to treatment by parents who are abusive or neglectful, and thus have had open child welfare cases (Lau & Weisz, 2003). Despite the greater need for mental-health treatment amongst children with histories of maltreatment, Hèbert & Tourigny (2010) found that children with greater problems at the outset of the group
intervention and those in foster care were those who dropped out of treatment. Early termination from treatment or attrition can be problematic, as a lack of treatment may result in an increase of behavioral and mental health-problems (Boggs, Eyberg, & Edwards, 2004; Prinz & Miller, 1994). Barrett et al. (2008) noted that early attrition negatively impacts multiple systems within psychotherapy treatment, including various treatment modalities, settings, and patient populations.

**Treatment attendance.** Treatment attendance is considered to be a critical component of treatment outcome, largely because of the relationship between positive treatment outcomes and treatment attendance and adherence to treatment recommendations (Miller, Southam-Gerow, & Allin, 2008). Furthermore, research has suggested that early termination from treatment results in an attenuation of therapeutic outcomes (Boggs et al., 2004; Prinz & Miller, 1994).

Nock and Ferriter (2005) defined *treatment attendance* as the maintenance of scheduled appointments at the treatment setting for the agreed upon treatment participants. Nock and Ferriter’s (2005) definition of *continuation in treatment*, which refers to the number of scheduled treatment sessions that the patient attends, will be utilized simultaneously with the term *treatment attendance* for the purpose of this study. The terms *premature termination* and *attrition* are interchangeable variables that describe the patient’s decision to stop treatment against the recommendation of the clinician or before the treatment plan has been completed (Nock & Ferriter, 2005). Premature treatment termination percentages range from 28 to 85% of children who begin treatment (Armbruster & Kazdin, 1994; Weisz & Weiss, 1993). In a meta-analysis of more than 400 children and adolescents who sought mental health treatment at a public clinic,
Miller et al. (2008) found that 83% of youth clients returned for treatment after the intake session, and 61.4% of youth clients terminated treatment after mutually agreement between the family and the therapist. Only 33.8% of youth clients completed the average number of sessions in the agency (Miller et al., 2008).

**Treatment attendance predictors.** Treatment attendance and attrition are problematic both in the adult and the youth populations, although the literature regarding the attrition of youth is limited (Miller et al., 2008). The most recent meta-analysis of therapy attrition was conducted in 1993 (Wierzbicki & Pekarik), and of the total 125 studies that were analyzed, only 16 studies were focused on the youth population. The majority of the studies involving youth psychotherapy attrition were randomized controlled trials based on manualized treatment conducted in research clinics (Miller et al., 2008). These samples are not reflective of the treatment that children and adolescents receive in community mental-health centers or private practices, where there is usually no predetermined endpoint of treatment (Miller et al., 2008). Based upon a summary of studies analyzed by Miller et al. (2008), there are several predictors of treatment attrition, including sociodemographic factors and clinical factors. Kazdin, Holland, and Crowley (1997) developed a scale to help identify the barriers to treatment attendance for children and their families in outpatient treatment. According to Kazdin et al. (1997), the barriers to child therapy can be divided into four domains: (a) stressors and obstacles, (b) a poor therapeutic alliance, (c) beliefs and expectations about the relevancy of treatment, and (d) perceptions about the demand level of therapy. From this study, they found that barriers to attendance were predictive of: (a) barriers to a strong therapeutic relationship, (b) limited time spent in treatment, and (c) treatment drop-out (Kazdin et al., 1997).
Practical stressors and obstacles. Covert factors may hinder one’s ability to attend treatment or deter the parent’s child from maintaining all scheduled appointments. For instance, in a community mental-health agency, a waiting list for treatment is often in place and thus may require a waiting period of 1 to 3 months before the child can be evaluated. Barrett et al. (2008) suggested that placement on the waiting list has been consistently linked to early withdrawal from treatment. Although a waiting list would not directly affect patients who are already in treatment, the large demand for community health services, limits the clinicians’ availability, especially with regard to appointments, and patients who do not show consistently for treatment can cause the waiting list to be longer (Barrett et al., 2008). Other factors may include an inability to afford treatment or a lack of insurance. Often, children who have witnessed community violence and are of a low socioeconomic status, also may have more urgent needs, such as food, shelter, and utilities that may supersede the need for treatment. In that same vein, children from poor, urban environments may have difficulty arranging transportation; their parents may not be able to bring them to treatment because of a lack of childcare for the clients’ siblings or their parents/caregivers may not be able to miss work for the appointment (Coles & Coles, 1978; Sue, Zane, & Young, 2004).

Expectations and beliefs. Although sociodemographic variables demonstrate a long history of impacting treatment attendance, expectations and beliefs regarding mental health, and mental health treatment outcomes have also been suggested to impact the level of one’s engagement and retention in treatment (Barrett et al., 2008). Kazdin and colleagues (1997) found that perceived barriers to treatment, including the belief that treatment is irrelevant or demanding, was the most predictive variable of treatment
attendance. Expectations regarding treatment outcomes can arise from the consumer seeking or in need of treatment, the consumer’s parents, or the clinician involved in the consumer’s treatment. In instances when patients do not expect treatment to be beneficial, this can significantly reduce the motivation or even willingness to attend treatment (Edlund et al., 2002); and lead to conflicts between the child and the caregiver. The parent or caregiver plays a vital role with regard to treatment expectations and treatment attendance. For instance, Nock and Kazdin (2001) note that there is an intricate relationship exists between parents’ expectations and treatment attendance. Parents who possess very low or very high expectations about treatment outcomes show an increased likelihood of attending sessions and completing treatment (Nock & Kazdin, 2001). The perspective of the therapist is also important. In a study that focused on the treatment process and dropout rate of children with persistent conduct problems, Luk et al. (2001) noted that the group which dropped out was rated by the therapist as least likely to improve.

Beliefs tend to involve perceptions regarding mental health and mental-health problems (Owens et al., 2002). Hardwick (1998) noted that negative perceptions about an illness or its treatment may also have a negative impact on treatment participation. For instance, a negative stigma may be attached to participation in psychotherapy (Sirey et al., 2001). Many racial minority groups do not have positive perceptions regarding mental-health problems often stemming from their cultural background and histories of socialization. Examples of such racial groups include: the African American community (Thompson, Bazile, & Akbar, 2004), the Latino community (Alvidrez, 1999), the Filipino American community (Sanchez & Gaw, 2007), and the Vietnamese and Chinese
American communities (Hampton, Yeung, & Nguyen, 2007). Certain beliefs, such as mental health does not exist or mental-health problems are a sign of weakness (Owens et al., 2002), may deter the child’s caregiver from maintaining consistent appointments in therapy, or ending treatment prematurely. The aforementioned examples are only a snapshot of the expectations and beliefs which may hinder one from entering or completing treatment.

**Therapeutic factors.** Based upon a factor-analysis, Garcia and Weisz (2002) found that financial issues and beliefs about the therapeutic relationship were the two most predictive factors of early treatment termination. Specifically, in this analysis of 10 community mental-health treatment centers, parents of those who dropped out perceived that (a) the therapist was not invested in treatment, (b) the therapist was incompetent or ineffective, (c) treatment was not going to be beneficial, and (d) treatment was too expensive (Garcia & Weisz, 2002).

The specific type of treatment is important to consider as a potential predictor of treatment attendance, as patients who are not agreeable with or who are poorly impacted by a specific form of treatment may be less likely to attend treatment consistently or until an agreed upon termination date. In the case of exposure therapy, Kilpatrick & Best (1984) suggested that imaginative exposure might exacerbate the posttraumatic symptoms, thereby re-traumatizing the patients. In a study, which reviewed 25 controlled studies in order to compare exposure-based therapy to cognitive therapy, stress inoculation training, and Eye Movement Desensitization and Reprocessing (EMDR) therapy, there was no significant difference in treatment dropout rates (Hembree et al., 2003). The average attrition rates for each type of treatment were as follows: 20.5% for
exposure treatments, 22.1% for cognitive therapy or stress inoculation training, 26.9% for exposure and other cognitive behavioral techniques, and 18.9% for EMDR (Hembree et al., 2003).

According to a study comparing treatment dropout rates in the United States to those in Ontario, no difference was found in the cumulative probability of treatment dropout (Edlund et al., 2002). Edlund et al., (2002) set out to determine if a number of factors, including the treatment modality, had an impact on treatment dropout rates. The probability of dropout was much lower amongst patients who received dual-modality treatment. Dual-modality treatment was provided by a psychiatrist or through the combination of a medical physician and a mental-health professional (Edlund et al., 2002). Dropout rates for both the United States and Ontario were approximately 10% of patients by the fifth session, 18% of patients by the 10th session, and 20% of patients by the 25th session (Edlund et al., 2002).

**Patient characteristics.** In a study analyzing various types of retention amongst children and adolescents involved in treatment at a community mental-health agency, Caucasian families demonstrated higher treatment completion rates than those demonstrated by other racial groups (Kazdin & Mazurick, 1994; Nock & Kazdin, 2001). The reason for the disparity in treatment attendance among different races may have been confounding variables regarding cultural factors. Miller et al. (2008) noted that in the studies, staff members were primarily Caucasian, which resulted in fewer differences in race between therapist and client. Furthermore, the treatments possibly were geared more towards the cultural beliefs and preferences of Caucasian families (Miller et al., 2008).
As a result, these factors may influence early termination from treatment among African American families.

In addition to racial background as a significant predictor of treatment attendance, Kendall and Sugarman (1997) noted that the marital status of the child’s parent seemed to be related to treatment dropout. In a study of 190 children and parents seeking cognitive-behavioral treatment for anxiety disorders, 146 participants completed the treatment, while 44 children dropped from treatment (Kendall & Sugarman, 1997). In 1997 Kendall and Sugarman reported that children with an ethnic minority background from single-parent homes were more likely than dual-parent homes to drop from treatment. Note that Kendall and Sugarman (1997) did not find the mother’s education level or socioeconomic status to be significant predictors of premature termination. Studies have suggested that the presence of parental psychopathology and stress have been associated with fewer treatment sessions attended and higher rates of premature termination (Armbruster & Kazdin, 1994; Nock & Kazdin, 2001).

Clinical factors. The child’s level of functioning at the outset of treatment plays a major role in treatment attendance and treatment completion (Kazdin, Mazurick, & Bass, 1993; Kazdin, Mazurick, & Siegel, 1994; Miller et al., 2008). Children who present to treatment with a poor level of functioning at the outset of treatment; demonstrating severe symptoms and problematic behaviors are more likely to demonstrate poor treatment attendance and early termination (Kazdin et al., 1993; Kazdin et al., 1994). Miller et al. (2008) found that individual predictors of early treatment termination included Axis I diagnosis, and Axis IV stressors. Children with an Axis I diagnoses other than an adjustment disorder and the presence of at least one psychosocial
stressor at the time of intake required a longer length of treatment (Miller et al., 2008). The presence of one Axis IV stressor can complicate the treatment process and lengthen the child’s duration of treatment (Miller et al., 2008). Likewise, youth with one prior psychiatric hospitalization have been suggested to require a longer length of outpatient treatment, although psychiatric hospitalization was not found to be a significant individual predictor of treatment dropout (Miller et al., 2008).

Children with less symptomatology require fewer treatment services (Miller et al., 2008), and one can presume that the likelihood of early termination would be lessened. When examining children with externalizing behaviors, Kendall and Sugarman (1997) reported that those who did not complete treatment had more diagnoses and more severe behaviors (Lau & Weisz, 2003) than those who completed treatment. On the other hand, studies of children with internalizing behavior problems suggest incongruous findings. For instance, Kendall and Sugarman (1997) found that youth clients who reported a reduction in anxious symptoms were most likely to terminate from treatment early, while Pina, Silverman, Weems, Kurtines, and Goldman (2003) found no differences between the completers and non-completers with internalizing behavioral problems.

Based upon the aforementioned literature, treatment attrition amongst youth and families is problematic, and these clients may terminate treatment prematurely for various reasons. Children and adolescents who have been victimized and initiate treatment are also subject to problems with treatment attendance and completion. Premature termination from treatment and difficulty with engaging in treatment are some of the known barriers amongst this population (Koverola et al., 2007). As previously suggested, these children demonstrate both externalizing and internalizing behavioral problems.
(Koverola et al., 2007). These behaviors may impact treatment completion in children with histories of victimization. Research has suggested that the well-being of the caregiver may also play a role in treatment completion (Koverola et al., 2007). In settings in which the home environment may be violent, or in which the caregiver shows significant depression or distress, then attendance in therapy may be inconsistent or incomplete (Kazdin, 1996; Koverola et al., 2007). Another area of concern is the type of caregiving setting. Koverola et al. (2007) noted that children in foster care who have been referred to treatment may have caregivers who are invested in the child’s well-being or who lack resources in order to help the child attain mental-health care. The data regarding treatment completion depending on the type of caregiving setting are limited (Koverola et al., 2007). This area of research is pertinent for the population of maltreated children, as the type of caregiver may be a risk factor for poor attendance or attrition. In addition, the added factor of the child’s functioning may further complicate treatment attendance in a population of children for whom effective treatment is imperative (Brookman-Frazee, Haine, Baker-Ericzén, Zoffness, & Garland, 2010).

**Impact of trauma on families.** The Greek word for trauma is *wounding* (Matsakis, 2004) and prolonged or severe traumatic experiences can *wound* or significantly impair one’s ability to engage in loving or close personal relationships (Matsakis, 1999; Spasojevic, Heffer, & Snyder, 2000). These individuals have difficulty in developing emotional connections with others because of their symptoms. Symptoms of PTSD prevent them from giving and receiving love; therefore, they may become more distant and emotionally withdrawn from their established loving relationships (APA, 2000). This onset of discomfort and detachment from relationships occurs at a time when
the support and comfort of others would seem to be needed the most (Matsakis, 2004). In addition, their symptoms resulting from the traumatic event can lead to alienation and angry outbursts, thereby impacting one’s immediate family, extended family, friends, neighbors, and coworkers (Matsakis, 2004). The interpersonal problems faced by trauma survivors are often exacerbated by internal or external triggers of the traumatic experience.

External triggers may be the family members or friends of the trauma survivor who have no intention of inflicting harm or fear. For instance, if a trauma survivor is in a loud, crowded place, such as a playground, a concert, a parade, or a mall, the noise level and the uncontrolled movements of others may lead to sensory overload (Matsakis, 2004). As a result, the survivor may limit time spent in such situations or avoid them altogether in order to protect him or herself. Other triggers, such as a smell, the inflection in someone’s voice, or an expressed feeling of someone else, may be more subtle. For example, if a caregiver is talking to a child in an angry tone, the child may know that danger is not imminent, but the child may be primed to be on guard for an outburst of violence. Consequently, the child may become hostile, overly suspicious, and emotionally unstable. Furthermore, home environments that are consistently chaotic and hostile can lead to feelings of helplessness and hopelessness, triggering the child to remember the helpless state that he or she endured during the traumatic incident. A negative self-perpetuating cycle is activated when the family members respond negatively to the child’s disposition. The responses of the child and his or her family members leads to an intensification of negative emotions in the home, and thus the cycle continues. In other instances, the emotional numbness that some trauma survivors
experience may result in concentration problems, disorganization when meeting new 
people, or a lack of psychological and physical energy necessary to achieve a goal (van 
der Kolk, 1996).

**PTSD and family dynamics.** Family members of traumatized individuals respond 
to them in various ways. In some families, trauma survivors are blamed for the 
dysfunction or problems in the family, while other families rally around the survivor in 
order to provide support and protection. In the latter instance, family members may alter 
their lives in order to accommodate the needs of the trauma survivor. Figley (1995) 
suggested that caring family members often shoulder the emotional impact of trauma 
exposure; experiencing the survivor’s feelings of anger, grief, and helplessness. In some 
families, there may be a dichotomy in the way the trauma survivors are treated; some 
family members may form an alliance with the trauma survivor while others may create 
separation from the survivor. The two poles of relating with the trauma survivor often 
seem to result in ambivalence between intense empathy and resentment. Siblings of 
trauma survivors often feel ignored and jealous of the survivor for receiving the attention 
of the caregivers. These feelings are often complicated by the guilt that they tend to feel 
for harboring such feelings.

Matsakis (2004) suggested that there is no predictable pattern exists for the impact 
of trauma exposure on family dynamics, although a host of factors can impact family 
relationships including (a) the nature and severity of the trauma, (b) the number of 
traumatic incidents, (c) the individual’s reaction during the traumatic event and any 
resulting psychological repercussions, (d) medical or financial ramifications of the 
incident, (e) the survivor’s beliefs regarding the traumatic incident(s), (f) successive
stressors, (g) the resiliency of the survivor and the family, (h) the culture and socioeconomic status of the family, and (i) their access to cultural and community resources. Although, contributing factors are numerous, the survivor’s perception of the traumatic event and his or her ensuing perspective of others, the world, and the future seem to be chief concerns (Matsakis, 2004).

**Social support.** Social support has been shown to help shift the negative belief systems of trauma survivors, and it has also been suggested to improve their overall health (Matsakis, 2004). Support systems may include family, friends, the child’s school, local support groups, or a religious affiliation (Matsakis, 2004). With the utilization of family support and community resources, trauma survivors have shown more consistent treatment attendance, better medical compliance, and fewer medical problems following the traumatic incident (Wagner, Wolfe, Rotnitsky, Proctor, & Erickson, 2000). The initiation of social support begins with the survivor’s level of personal resources; therefore, survivors who lack personal resources are less likely to engage and benefit from social support systems. In essence, losses in social support can lead to many other losses, and thereby mediate the impact of traumatic events.

Personal resources include self-esteem, self-efficacy, and optimism (Bandura, 1997; Carver & Scheier, 1998; Matsakis, 2004; Rosenberg, 1965). These internal resources are closely tied to external resources and thus assist the survivor in mobilizing social supports that help them to manage their everyday challenges. Research has shown that optimism is positively related to adjustment over time (Dougall, Hyman, Hayward, McFeeley, & Baum, 2001). On the other hand, survivors who have limited personal resources are more likely to react negatively to stress and demonstrate poor adjustment.
Hobfoll, Nadler, and Leiberman (1986) noted that personal resources are also predictive of one’s level of satisfaction with support symptoms partially because of one’s ability to benefit from the buffering aspects of social supports. Overall, the presence of personal resources helps to harness a strong social support system, a reliable coping resource that assists in the adjustment of trauma survivors.

*Family support and coping.* Social support is beneficial in that it is a collectivistic approach towards helping the survivor to cope and overcome internal and external obstacles following exposure to a traumatic event. A supportive, cohesive family is one of the most vital aspects of assisting survivors in their ability to cope. Research has demonstrated a reduction in PTSD levels in Israeli soldiers who had strong familial support (Solomon, Mikulincer, Fried, & Wosner, 1987). In addition to members of the immediate family, extended family members or community members can also serve as vital components of the survivor’s support system. Owing to one’s relationship and connection with the survivor, family members must understand the detrimental impact of trauma exposure and be active participants in their treatment.

Exposure to traumatic events can be in a life-altering experience resulting in characteristic symptoms of PTSD, including hypervigilance, hyperarousal, and avoidance (APA, 2000; Ford et al., 2010). The incidence of traumatic exposure amongst American youth is confounding at more than 50% (Cohen et al., 2010). Children living in foster care show the greatest risk for traumatic exposure, often resulting in a sense of instability and uncertainty amongst a population of children who often require a period of adjustment outside of the aforementioned factors (Mitchell et al., 2010). If the level of posttraumatic symptoms impairs psychosocial functioning, psychological treatment is
recommended (Cohen et al., 2006; Grasso et al., 2009). Koverola et al. (2007) suggested that a stable, caregiving environment and symptoms of PTSD may influence treatment attendance. Therefore, this study was designed to determine if a relationship exists between the caregiver setting and level of PTSD symptoms, as well as treatment attendance. Furthermore, this study aimed to determine if the level of PTSD symptoms amongst foster care children impacted their treatment attendance. The level of PTSD symptoms and number of attended treatment sessions for children living with a non-foster caregiver were compared to those for children living in foster care. Additionally, the level of PTSD symptoms and treatment attendance rates were analyzed amongst children living in foster care.
Chapter 3

Hypotheses

Research examining PTSD in children is widespread, although there is a paucity of research that examines PTSD diagnosed in children living in foster care. Furthermore, little research evaluates treatment attendance in children who have been diagnosed with PTSD. Therefore, the following hypotheses were addressed in this study:

**Hypothesis 1**

Children living with foster caregivers will endorse higher levels of PTSD symptoms when compared to those of children living with non-foster caregivers when symptoms are analyzed at baseline before treatment began.

*Rationale.* Research suggests that entrance into foster care is a significant factor associated with instability (Bellamy et al., 2010) and increases the child’s risk of poor psychosocial functioning (Wise & Egger, 2009).

**Hypothesis 2**

Children living with foster caregivers will demonstrate a lower number of attended sessions when compared to the number attended by children living with non-foster caregivers.

*Rationale.* Foster care children who demonstrate externalizing behavioral problems are more likely than non-foster care children to experience placement disruptions (Bellamy et al., 2010). Furthermore, children who present to treatment with a poor level of functioning at the outset of treatment, demonstrating severe symptoms and problematic behaviors, are more likely, than their treatment counterparts with a higher
level of functioning to demonstrate poor treatment attendance and early termination
(Kazdin et al., 1993; Kazdin et al., 1994).

**Hypothesis 3**

Children living in foster care with low treatment attendance will demonstrate a higher level of PTSD symptoms at 6 months after treatment began.

**Rationale.** Hèbert & Tourigny (2010) found that children with greater problems at the outset of the group intervention and those in foster care were those who dropped out of treatment. Children with externalizing behaviors who terminated treatment early had more diagnoses (Kendall & Sugarman, 1997) and more severe behaviors (Lau & Weisz, 2003) than those who completed treatment.
Chapter 4

Methods

Overview

Research has demonstrated that children who have been exposed to traumatic events show significant strains in their interpersonal relationships (Marquis et al., 2008; Morrison et al., 1999). Howes (1999) also suggested that a stable, caregiving relationship is vital to the well-being of a child diagnosed with PTSD (Howes, 1999). As a result, the foster care environment would seem to present significant strain on a child who has already been diagnosed with PTSD. In turn, these biopsychosocial stressors may have a negative impact on the level of PTSD symptoms and the overall well-being of the foster care providers. Therefore, this research study builds upon current research by evaluating the difference between levels of PTSD symptoms in children living with foster care providers and those living with non-foster caregivers. The treatment attendance rates between both groups have also been analyzed to determine if there is a significant difference between both groups.

Design and Design Justification. The data utilized in this cross-sectional study was attained from a longitudinal data set. In the archival study, there were four identified caregiver settings: including “birth” (n = 35), “foster” (n = 25), “relative” (n = 10) and “other” (n = 2). The foster and relative caregiver settings were collapsed into one group as a result of the small number of participants within those individual groups. The participants in the “other” caregiver setting resided in a group home, and thus were not included in the study because the caregiver relationship in the group home setting is between the child and the institution as opposed to a relationship between the child and
caregiver as in foster-care and non-foster caregiver settings. Furthermore, the group home setting is not characteristic of the foster caregiver setting. As a result, a comparison of two groups including the foster caregiver setting \((n = 35)\) and the non-foster caregiver setting \((n = 35)\) was performed. Therefore, this study involved a between-group design approach as the selected subjects were evaluated based upon differences in caregiver setting characteristics. In addition, a correlational design was established to examine for a statistical relationship between two variables corresponding to participants in the foster caregiver group.

In the archival study, all youth participants were screened with the University of California at Los Angeles (UCLA) Posttraumatic Stress Disorder (PTSD) Reaction Index for *DSM-IV*, Abbreviated version (UPID-A) (Pynoos, Rodriguez, & Steinberg, 2001). The UCLA PTSD Reaction Index for *DSM-IV*, Revision 1 (Pynoos et al., 1998) was utilized as an evaluative measure throughout treatment. A demographic questionnaire, developed for the archival study was also utilized.

This research design utilized a Multivariate Analysis of Variance (MANOVA) and independent samples t-test to compare two categories of participants based upon their reported UPID subscale scores and overall PTSD symptom severity scores at baseline, respectively. An independent samples t-test was also utilized to compare the two caregiver settings based upon the total number of attended treatment sessions. Furthermore, a Pearson \(r\) correlation and regression analysis were utilized to determine if a relationship exists between the total number of sessions attended and the overall PTSD symptom severity score at 6 months for children identified as living in the foster
caregiver setting. The 6 month time point was selected because treatment was suggested to have ended by month 6 in the archival study.

**Recruitment**

Participants recruited for this study were attained from a pre-existing sample of convenience. The child and adolescent participants sought treatment for symptoms of PTSD at a behavioral healthcare network located in three Delaware counties including New Castle, Kent and Sussex counties, and thus comprised participants from rural, urban, and suburban communities. The doctoral student responsible for this study communicated with the archival study’s Primary Investigator and expressed interest in analyzing the identified sample based upon the aforementioned hypotheses. The Primary Investigator of the archival study helped to facilitate communication with the Western Institutional Review Board associated with the archival study. The Western Institutional Review Board then communicated with the Institutional Review responsible for this study to ensure that the doctoral student was granted approval to conduct the study. In doing so, the Primary Investigator of this study had to ensure the Western Institutional Review Board that no identifying client information would be utilized, thereby maintaining participant confidentiality.

**Inclusion Criteria**

The data set utilized for this study was already created by the archival study; thus, the selection and exclusion criteria for participation in this current study were largely defined by the archival study selection criteria. In the archival study, participation selection required English-speaking child and adolescent clients between 7 and 16 years of age, who resided in a foster caregiver setting or non-foster caregiver setting and
PTSD SYMPTOMS, TREATMENT ATTENDANCE and CAREGIVER SETTINGS

qualified for publicly funded treatment. They had to report being exposed to some form of traumatic experience, which had to be independently verified either through police report or child protection service report. On the UPID-A, participants had to have a total score of 17 or more, or endorse three of nine PTSD symptoms at a frequency of much or most during a 1-month period. Selection in the original study also required the participants to have a legal guardian who was English speaking and, willing to consent to treatment, provide transportation, and coparticipate in treatment and a year-long follow-up study.

**Exclusion Criteria**

Potential participants who had a sibling already in the study, endorsed symptoms of untreated psychosis or substance abuse, or required frequent hospitalizations were not included in the study, as these concerns required a more intense level of care. Children diagnosed with an intellectual disability were excluded from participation in this study as their cognitive abilities may have prevented them from being able to appropriately complete the UPID-A self-report measure. Those identified as “other” in the archival study were also excluded because they lived in a group home setting.

**Participants**

The study included 70 youth clients between the ages of 7 and 16 years, mean age 12.7 years ($SD = 2.60$) for children living in foster care and 11.9 years ($SD = 2.87$) for those living in the non-foster care setting, who were originally recruited to participate in a longitudinal study assessing the efficacy of Trauma Focused-Cognitive Behavioral Therapy in treating children endorsing a history of trauma exposure. Thirty-five children (50%) lived with their primary non-foster care parents, while 10 participants (14%) lived
with kinship foster care providers and 25 (36%) lived with traditional foster caregivers. The children living in kinship foster care and those living with traditional foster caregivers were collapsed into one group identified as foster care. Of those in the foster care group, 21 were female participants and 14 were male participants, while 23 female and 12 male participants were in the non-foster care group. All of the participants were of low socioeconomic status, and because of a lack of health insurance qualified for the publicly funded treatment. Of the 70 participants, 54.3% were Caucasian, 38.6% were African American, 4.2% identified themselves biracial, and 2.9% were Hispanic Latino.

**Measures**

**Demographic questionnaire.** During the original study from which the archival data were obtained, a standard demographic questionnaire developed for the behavioral health network was utilized to gain background information for each participant, including the participant’s age, gender, and ethnicity/racial background; the caregiver’s relation to the child; and the income status of the non-foster caregivers. Data from the original study indicate that 50% of the youth participants lived in foster care, including 36% of the youth participants who lived with a traditional foster caregiver and 14% of those who lived with a relative foster caregiver. The remaining 50% lived with their non-foster care parents. The median household income of non-foster and kinship foster caregivers was $37,850.

**UCLA PTSD Reaction Index for DSM-IV, Revision 1 (UPID).** The UPID is a self-report measure that assesses the youth’s history of trauma exposure and any resulting symptoms of PTSD. This screener is not a structured clinical interview for identifying PTSD; therefore, the UPID should not be utilized as a diagnostic tool (Rodriguez,
Steinberg, & Pynoos, 1999). In the original study from which archival data were obtained, all youth participants were screened with the UPID at baseline (during the intake evaluation prior to treatment) and subsequently at 3 months, 6 months, 9 months, and 12 months after treatment began.

**Population and administration.** There are three forms (child, adolescent, and parent) of this instrument (Rodriguez et al., 1999), but for the purpose of this study, only the child and adolescent versions were utilized. This paper-and-pencil screening instrument requires approximately 25 to 30 minutes to complete, depending upon the child’s age, and reading level, as well as upon the method of administration (Steinberg et al., 2004). The measure can be administered independently by the child or adolescent, or the clinician can read the items and record the responses.

**Design and content.** The UPID is subdivided into three sections (Rodriguez et al., 1999). The first section of the measure consists of 14 items, worded in child-friendly language, requiring a yes or no response to evaluate exposure to various forms of trauma (Steinberg et al., 2004). If trauma exposure is endorsed, the measure inquires about the number of exposures, and the event that currently is most troublesome (Rodriguez et al., 1999; Steinberg et al., 2004). The clinician is then required to write a brief description of the particular traumatic event and when it occurred (Steinberg et al., 2004). The second component of the UPID contains 13 items on the child version, while the adolescent version contains 15 items; the two additional items on the adolescent version pertain to symptoms of avoidance and anger/irritability. These items also require a yes or no response and assess for the presence and severity of the youth’s PTSD symptoms, present during the previous month, which map onto *DSM-IV* (1994) criterion A (Rodriguez et al.,
1999; Steinberg et al., 2004). The third component of the UPID contains 20 items, which assess the frequency of PTSD symptoms that occurred during the previous month, which map onto DSM-IV (1994) criteria B, C, and D. The responses are rated on a 5-point Likert scale, ranging from 0 = none of the time to 4 = most of the time. The frequency rating sheet is a supplemental visual aid that corresponds with the five response choices in order to assist the respondent in making the most accurate choice (Ellis, MacDonald, & Lincoln, & Cabral, 2008; Steinberg et al., 2004).

**Scoring.** Training qualifications for administering, scoring, and interpreting the UPID include graduate training under the supervision of a Master’s level licensed therapist with experience in the assessment of trauma exposure and treatment of PTSD among youth (Steinberg et al., 2004). The scoring process requires no more than 10 minutes to complete, and each version of the UPID measure has a corresponding score sheet (Steinberg et al., 2004). Scoring is conducted to provide clinical impressions and to assess the overall severity of PTSD symptoms. The score sheet is divided into three sections, which map onto each of the four DSM-IV (1994) criteria for PTSD.

The first two components of the score sheet help to determine if the respondent meets DSM-IV (1994) criterion A for PTSD based upon the number of “yes” responses (i.e., at least one “yes” for Trauma exposure - questions 1 – 13, at least one “yes” for criterion A1 - questions 15 – 21, and at least one “yes” for criterion A2 - questions 22 – 26). The third component of the score sheet (i.e., questions 1 – 20) yields individual sums, which map onto criteria B, C, and D for PTSD of the DSM-IV (1994), thereby resulting in a total severity score for each criterion. If the respondent endorses the appropriate number of symptoms for each symptom subcategory (i.e., ≥ 1 for
reexperiencing symptoms, ≥ 2 for symptoms of hyperarousal, ≥ 3 for symptoms of avoidance), the *DSM-IV* (1994) criteria for each subcategory is satisfied (Rodriguez et al., 1999; Steinberg et al., 2004). The symptom cutoff score for each symptom subcategory of the UPID is greater than or equal to 3 (i.e., much or most of the time), which suggests that the symptom is present. In addition, the sums are cumulated for each criterion to determine the total score or overall posttraumatic stress symptom severity. The total possible score can range from 0 to 68, while the clinical cutoff is a score greater than or equal to 38, indicating that the child or adolescent is highly likely to be diagnosed with PTSD. In this instance, criterion A is met, and the symptom cutoff is met for criteria B, C, and D (Rodriguez et al., 1999). Cumulative scores between the high 20s and 30s are subclinical, and a partial diagnosis is likely when the youth meets criterion A and the symptom cutoff is met for a combination of only two other criteria (Rodriguez, 1999).

*Psychometric properties.* The UPID demonstrated high internal consistency, with a Cronbach’s alpha of .90 (Layne et al., 2001; Roussos et al., 2005; Steinberg et al., 2004, Steinberg et al., 2013) and moderate test-retest reliability, with a Pearson correlation of 0.84 (Roussos et al., 2005; Steinberg et al., 2004; Steinberg et al., 2013). With regard to construct validity, Rodriguez, Saltzman, and Pynoos (2001b) found that the index subscales and total score of the UPID significantly correlated with the PTSD symptom clusters of the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS), Epidemiologic Version 5 (Orvaschel, n.d.), ranging from $r = 0.49$ to 0.70 (Rodriguez, Steinberg, Saltzman, Pynoos, 2001a, Rodriguez et al., 2001b). PTSD has been detected with a cutoff of 38, with a sensitivity of 0.93 and specificity of 0.87 (Rodriguez et al., 2001a, 2001b).
UCLA PTSD Reaction Index for DSM-IV, Abbreviated Version (UPID-A).

The UPID-A, also a self-report measure, contains nine items that assess the history of trauma exposure and any resulting symptoms of PTSD in youth ages 7 to 18 years (Pynoos, Rodriguez, & Steinberg, 2001; Steinberg et al., 2004). It was specifically designed for the purpose of conducting needs assessments and for screening New York public school students after September 11, 2001 (Steinberg et al., 2004). Cohen, Kelleher, and Mannarino (2008) encouraged pediatric providers to use the UPID-A as a screening tool for PTSD in children and adolescents. During the original study, the UPID-A was conducted over the phone with the child/adolescent in order to determine if criteria for PTSD were met.

On the nine-item response sheet, the respondent must choose a response of best fit from the 5-point Likert scale, ranging from 0 = none of the time to 4 = most of the time, similar to the UPID. If the respondent endorses a total score of 17 or more, or reports symptoms as occurring much of the time or most of the time, on three of the nine items, then he or she is considered to have symptoms related to a traumatic event (Steinberg et al., 2004). The Cronbach’s alpha equals 0.87 for the nine-item UPID-A scale, and 20 is the corresponding cutoff to the full scale for the receiver operator characteristic curves (Steinberg et al., 2004).

Definition of Treatment Attendance. The operational definition of treatment attendance for the purpose measurement in this study is continuation in treatment which is a continuous variable and related construct of treatment attendance (Nock & Ferriter, 2005). Therefore, the participant’s continuation in treatment, is a numerical value that
was tabulated in the original study based upon the total number of sessions that the child/adolescent attended.

**Procedure**

This archival study is based upon data that were collected at a behavioral health network for children and adolescents. The selected participants were administered the UPID-A over the phone. If the child/adolescent scored a 17 or more on the UPID-A, or endorsed three out of the nine PTSD symptoms (occurring much or most of the time during the past month), they were included in the study. The youth participants were administered the full version of the UPID during the intake evaluation as a baseline measure before treatment started, and it was re-administered at 3 months, 6 months, 9 months, and 12 months after treatment began. The treatment protocol was designed for 12 sessions, lasting between 3 to 6 months, and the mean treatment dose was 9.79 ($SD = 4.97$) for the child/adolescent participants. The collected data were then entered into the Statistical Package for the Social Sciences (SPSS) version 20, an IBM-compatible computerized data analysis software program.

The doctoral student responsible for this study attained permission from the archival study’s Institutional Review Board to utilize the deidentified data, after which the Principal Investigator of the archival study reviewed the data set. The doctoral student reviewed the data collected on the original 72 child/adolescent participants who were identified based upon their type of caregiver. Those identified as “other” were not included in the study, as their caregiver setting could not be identified. As a result of the small size of the sample, and the even smaller number of participants in the “relative” and
“foster” groups, the 70 child/adolescent participants were grouped into two categories: foster caregiver setting and non-foster caregiver setting.

Preliminary analyses including frequency distributions were performed to assess for differences in the distribution of independent participant characteristics (i.e., demographic factors, including age, sex, race, and ethnicity) between participants living in foster care and non-foster care.

For the first hypothesis, baseline scores on the UPID were subjected to a general MANOVA. An independent samples t-test was then conducted to assess differences across the caregiver settings in the total PTSD symptom severity score on the UPID. For the second hypothesis, an independent samples t-test was conducted to assess differences between the caregiver settings and continuation in treatment (a continuous variable). Lastly, a regression analysis was performed to determine if there was a linear relationship between continuation in treatment and the total UPID score at month 6 for those in the foster caregiver setting.
Chapter 5

Results

Preliminary Analyses

Preliminary analyses were conducted using SPSS version 20 software for the sample of 70 respondents. Variables including (a) sex, (b) race, and (c) ethnicity were categorical, resulting in the use of a chi-square analysis to evaluate differences between the two categories of caregiver setting (foster caregiver and non-foster caregiver) based upon the aforementioned independent factors. These findings revealed that there was no significant difference in the distribution of male and female participants across the foster versus non-foster categories, $X^2(1, N = 70) = .245, p = .621$. Frequency counts are shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Frequency Distribution of Participant Sex by Caregiver Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foster caregiver ($n = 35$)</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Child sex</td>
</tr>
<tr>
<td>Female count</td>
</tr>
<tr>
<td>Expected count</td>
</tr>
<tr>
<td>Male count</td>
</tr>
<tr>
<td>Expected count</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Count</td>
</tr>
<tr>
<td>Expected count</td>
</tr>
</tbody>
</table>
Testing for the difference in distribution of race across the different caregiver setting categories revealed no significant differences between race and caregiver setting, $X^2 (3, N = 70) = 1.68, p = .641$. Frequency counts are shown in Table 2.

Table 2

<table>
<thead>
<tr>
<th>Child Race</th>
<th>Foster caregiver ($n = 35$)</th>
<th>Non-foster caregiver ($n = 35$)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White count</td>
<td>21</td>
<td>17</td>
<td>38</td>
</tr>
<tr>
<td>Expected count</td>
<td>19.0</td>
<td>19.0</td>
<td>38.0</td>
</tr>
<tr>
<td>African American count</td>
<td>11</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Expected count</td>
<td>13.5</td>
<td>13.5</td>
<td>27.0</td>
</tr>
<tr>
<td>Hispanic count</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Expected count</td>
<td>1.0</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Biracial count</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Expected count</td>
<td>1.5</td>
<td>1.5</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Count</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>Expected count</td>
<td>35.0</td>
<td>35.0</td>
<td>70.0</td>
</tr>
</tbody>
</table>

Comparing the distribution of race (white vs. black) across caregiver settings revealed no significant differences, $X^2 (1, N = 70) = 1.51, p = .220$. Frequency counts are shown in Table 3.
Table 3

*Frequency Distribution of Participant Race (White vs. Black) by Caregiver Setting*

<table>
<thead>
<tr>
<th>White vs. Black</th>
<th>Foster caregiver (n = 35)</th>
<th>Non-foster caregiver (n = 35)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>24</td>
<td>19</td>
<td>43</td>
</tr>
<tr>
<td>Black</td>
<td>11</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
</tbody>
</table>

Similarly, there were no significant differences in the distribution of race (white vs. other) across caregiver settings, $X^2 (1, N = 70) = .215, p = .643$. Frequency counts are shown in Table 4.

Table 4

*Frequency Distribution of Participant Race (White vs. Other) by Caregiver Setting*

<table>
<thead>
<tr>
<th>White vs. Other</th>
<th>Foster caregiver (n = 35)</th>
<th>Non-foster caregiver (n = 35)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>32</td>
<td>33</td>
<td>65</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>
Lastly, there was no significant difference in the distribution of ethnicity (Non-Hispanic and Hispanic) across the two caregiver settings, $X^2 (1, N = 70) = 1.43, p = .232$. Frequency counts are shown in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Child ethnicity</th>
<th>Foster caregiver ($n = 35$)</th>
<th>Non-foster caregiver ($n = 35$)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-hispanic</td>
<td>33</td>
<td>30</td>
<td>63</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
</tbody>
</table>

In addition, a preliminary independent samples t-test was conducted to compare the distribution of age (a continuous variable ranging from ages 7 – 16 years) across the two caregiver settings. There were no significant differences in mean participant age for the foster caregiver setting conditions, $t (68) = 1.25, p = .214$. Means, standard deviations, and standard error of means are shown in Table 6.
Overall, the preliminary analyses revealed no significant differences between the groups (foster vs. non-foster care) on several relevant demographic variables. These findings reveal that the two comparison groups were equal and comparable across the dimensions of gender, race, ethnicity, and age.

**Primary analyses**

The first hypothesis purported that children living with foster caregivers would endorse higher levels of PTSD symptoms (i.e., reexperiencing, hyperarousal, avoidance, and total PTSD symptom severity) than those living with non-foster caregivers at baseline before treatment began. A one-way MANOVA was conducted using caregiver setting (foster vs. non-foster) as the independent variable, and the UPID subscales (i.e., reexperiencing, hyperarousal, and avoidance) as the dependent variables. Each of the subscales of the dependent variable were shown to be positively and moderately intercorrelated, which satisfies one of the assumptions test for a MANOVA as shown in Table 7.
### Table 7

**Correlation of UPID Subscales at Baseline**

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Reexperiencing</th>
<th>Hyperarousal</th>
<th>Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reexperiencing</td>
<td>1</td>
<td>.596**</td>
<td>.456**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Avoidance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson</td>
<td>.456**</td>
<td>.563**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Hyperarousal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson</td>
<td>.596**</td>
<td>1</td>
<td>.546**</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

*Note. UPID = UCLA PTSD Index for DSM-IV, Revision 1.*

** Correlation is significant at the 0.01 level (1-tailed)

Descriptive statistics, including means and standard deviations of the UPID subscales by caregiver settings, are shown in Table 8.
Table 8

**Descriptive Statistics of UPID Subscales by Caregiver Setting**

<table>
<thead>
<tr>
<th>UPID Subscales</th>
<th>Foster caregiving (n = 35)</th>
<th>Non-Foster caregiving (n = 35)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Reexperiencing</td>
<td>10.7</td>
<td>5.26</td>
<td>9.51</td>
</tr>
<tr>
<td>Avoidance</td>
<td>13.2</td>
<td>5.30</td>
<td>11.7</td>
</tr>
<tr>
<td>Hyperarousal</td>
<td>9.91</td>
<td>4.35</td>
<td>11.5</td>
</tr>
</tbody>
</table>

*Note. UPID = UCLA PTSD Index for DSM-IV, Revision 1.*

Box’s test of equality of covariance matrices, testing the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups, was nonsignificant, Box’s $M = 2.121, F(6, 33502.19) = .337, p = .918$. This result indicates that the covariance matrices of the dependent variables are equal across groups. The multivariate test of differences among the dependent variables between groups was found to be statistically significant, Wilks’ $\lambda = .859, F(3, 66.0) = 3.60, p = .018$, Partial eta squared = .141, and revealed that 14% of the variability on the dependent variables is attributable to changing the level of the independent variable. Power to detect the effect was .769.

The Levene’s test of equality of error variances, testing the null hypothesis that the error variance of the dependent variables are equal across groups on the reexperiencing subscale $F(1, 68) = .215, p = .644$, the avoidance subscale, $F(1, 68) =$
3.109, \( p = .082 \), and the hyperarousal subscale, \( F(1, 68) = .014, p = .906 \) were not significant. The post hoc univariate analysis of variance (ANOVA) post-test of between subjects effects revealed that there was no significant differences between the caregiver setting groups on the reexperiencing subscale, \( F(1, 68) = .263, p = .610 \), the avoidance subscale, \( F(1, 68) = 1.19, p = .280 \), and on the hyperarousal subscale, \( F(1, 68) = 2.35, p = .130 \).

A t-test for independent groups using caregiver setting as the independent variable (foster vs. non-foster) and the UPID total symptom severity score at baseline was conducted. The means and standard deviations are included in Table 9.

<table>
<thead>
<tr>
<th>Symptom Severity</th>
<th>Foster caregiving setting ((n = 35))</th>
<th>Non-foster caregiving setting ((n = 35))</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPID total symptom score</td>
<td>33.3 ( \pm ) 12.7</td>
<td>32.7 ( \pm ) 13.2</td>
</tr>
</tbody>
</table>

*Note. UPID = UCLA PTSD Index for *DSM-IV*, Revision 1.*
The Levene’s test for equality of variances was not statistically significant, $F(1, 68) = .218, p = .642$. With equal variances assumed, the result, $t(68) = .176, p = .861$, was not statistically significant. The lack of statistical significance suggests that the two caregiver settings did not differ on the total UPID PTSD symptom severity score.

According to the second hypothesis, the doctoral student responsible for this study proposed that children living with a foster caregiver would demonstrate a lower number of total sessions attended than the number demonstrated by those living with a non-foster caregiver. A t-test using parent type (foster vs. non-foster) as the independent variable and continuation in treatment (total number of sessions attended) as the dependent variable was conducted. The means and standard deviations are listed in Table 10.

<table>
<thead>
<tr>
<th>Continuation in treatment</th>
<th>Foster caregiving setting $(n = 35)$</th>
<th>Non-Foster caregiving setting $(n = 35)$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of sessions attended</td>
<td>$M = 9.26$</td>
<td>$SD = 5.14$</td>
</tr>
</tbody>
</table>
The Levene’s test for equality of variances was not significant $F(1, 68) = 1.31, p = .257$. With equal variances assumed, the t-test, $t(1, 68) = -1.11, p = .270$, was not statistically, significant indicating that no differences exist between the two caregiver settings on total number of sessions attended. As a result, the proposition that children living in foster care would have lower treatment attendance rates than those of children living in non-foster care was unsupported.

The third hypothesis proposed that participants in the foster caregiving setting with a high level of total PTSD symptom severity measured at baseline would demonstrate a lower total number of treatment sessions attended than those with a low level of total PTSD symptom severity. A simple regression was calculated using continuation in treatment (total number of sessions attended) as the predictor variable and the total UPID PTSD symptom severity score at 6 months as the criterion. The Pearson correlation coefficient between the two variables, $r(72) = -.11, p = .138$, was not statistically significant. The overall regression equation was not statistically different from chance, $F(1, 65) = .781, p = .38$, and the standardized beta coefficient ($\beta = .109$) was also not significant as expected, $t = -.883, p = .38$. Total number of sessions attended does not make a significant contribution to the prediction of level of PTSD symptomatology.
Chapter 6

Discussion

Based upon the results, there was no statistically significant difference found in the level of PTSD symptoms between children living with foster caregivers and those living with non-foster caregivers, which suggest that the caregiver setting did not have an impact on the level of PTSD symptomatology at baseline. The finding of the first hypothesis is in contrast to the literature, which suggests that a significant number of children who are placed in foster care experience instability as a result of multiple placement changes or fluctuations of living in and out of foster care (Racusin, Marlender, Sengupta, Isquith, & Straus, 2005). As a result, a child who is concerned about the safety of the living environment and/or the length of stay with a foster family may, in fact, have very realistic concerns, and hence be more susceptible to symptoms, such as concentration difficulties, insomnia, irritability, and psychological distress. Moreover, children who are taken from their primary non-foster caregiver family to live with a traditional or treatment type of foster caregiver whom they may have never met may experience feelings of fear, confusion, and vulnerability (Dubner & Motta, 1999; Racusin et al., 2005). Furthermore, these distressing emotions may be activated and/or exacerbated by symptoms of PTSD (Dubner & Motta, 1999; Racusin et al., 2005).

Despite this knowledge about the nature of the foster caregiver setting, and the youth’s possible reaction to the setting, the results of this study did not support the literature, and thus treatment and future studies can be informed by knowledge of why living with a foster caregiver does not have a statistically significant negative impact on children and adolescents with traumatic histories.
Fundamentally, the lack of statistically significant differences in PTSD symptoms between the caregiver settings is accounted for by the similarity in the severity of PTSD symptoms for all participants. Although the UPID lacks a specific interpretative score range for each subscale, the approximate median score for each of those subscales across caregiver settings, suggests that both groups experienced the specific symptoms of PTSD at a moderate level. Based upon this preliminary information, one can conclude that the foster caregiver setting is a suitable setting, comparable to a non-foster care setting, where children diagnosed with PTSD can live. Furthermore, the statistically similar scores on the UPID subscales, as well as on the total UPID PTSD symptom severity score, could reasonably suggest that children living with a non-foster caregiver are not at less risk for having a moderate level of symptoms. The literature highlights that an increased risk of being exposed to community violence is associated with living in an urban, poor community (Bell & Jenkins, 1993; Koop & Lundberg, 1992; Schubiner et al., 1993; Schwab-Stone et al., 1995). The representative sample for this study involved participants whose total household income was $21,000 below the median household income for the northeastern state in 2011 (U.S. Census Bureau, 2013). Given a sense of the participants’ economic status, perhaps those living in non-foster care were exposed to either community violence or triggering reminders of their traumatic experiences on a consistent basis, which may have either exacerbated their PTSD symptoms or hindered the symptoms from decreasing after the initial exposure.

Another possible explanation for the lack of statistically significant differences could be related to the length of stay of children in the foster caregiver setting. The length of time that the respective participants lived in foster care (whether it was kinship
or traditional) was unknown; therefore, perhaps the type of caregiver setting did have an impact on their level of PTSD symptoms that could not be accounted for at the time when their symptoms were recorded at baseline. The absence of statistically significant differences between the two groups might be explained by a scenario in which children living in foster care had lived with their foster caregiver(s) long enough to adjust to their caregiver(s) and to the setting as a whole. In essence, if the period of adjustment to the foster caregiver setting had an effect on the level of PTSD symptoms, the length of time may have precipitated the statistically similar level of PTSD symptoms across the caregiver settings when the measures were given at baseline.

An additional consideration regarding the lack of statistically significant differences across caregiver settings may have been related to the types of traumatic events to which the participants had been exposed. One cannot assume that the study participants experienced the same forms of trauma, because those living in foster caregiver settings had to have experienced some form of maltreatment (neglect or abuse) that resulted in their being removed from the home, while those living in non-foster care experienced some other form of trauma, which instead allowed their families to remain in intact. Thus, the type of traumatic experiences may not have been similar, but the participants’ interpretations of those experiences may have been very similar.

In regard to the second hypothesis, there were no significant differences across settings in participants’ continuation in treatment because both groups attended consistently, many beyond the 12 sessions for the designed treatment protocol. Factors such as parent perceptions of fewer perceived barriers among non-foster and foster caregivers may have served as a protective factor against premature attrition (Kazdin et
al., 1997). Perhaps the impetus for consistent treatment attendance among children living in foster care providers stemmed from a lack of understanding (training) on how to respond to the child’s needs or resulted from the desire to help the child receive the best care (Cuddeback & Orme, 2002; Dorsey et al., 2008). For both caregiver settings, the expectation about the relevancy of treatment for the child’s problems may have influenced the overall positive treatment attendance in that the caregiver with very high or very low expectations about treatment and treatment attendance is more likely to attend and complete treatment (Nock & Kazdin, 2001). Therefore, perhaps those who attended treatment at a high level, may have had caregivers with very low or very high expectations about the benefit of treatment. Continuation in treatment earned caregivers a monetary incentive; therefore, perhaps the incentive was a motivating factor for both caregiving settings.

Based upon the results of the regression and the Pearson two-tailed correlation, there was no significant relationship between the total UPID PTSD symptom severity at 6 months and treatment attendance in children living with foster caregivers. According to the third hypothesis, an inverse relationship was proposed to occur between the two variables of total PTSD symptom severity and treatment attendance. The inverse relationship was not present, and no positively correlated relationship was present. The lack of a linear relationship suggests that the total number of sessions had no influence upon the total UPID PTSD symptom severity score measured six months after treatment began among children living with foster caregivers. From a clinical standpoint, in order for children living with foster caregivers to experience some degree of symptom relief the importance of consistent treatment attendance cannot be overemphasized. The study
conducted by Deblinger, Mannarino, Cohen, Runyon, and Steer (2011), found that children with a history of sexual abuse or PTSD symptoms experienced symptom relief regardless of the number of treatment sessions that they attended. Overall, none of the hypotheses were supported in this study, and thus consideration of any limitations that may be useful for future research is important.

Limitations

As previously mentioned, this study is archival, and thus, the doctoral student responsible for this study could not control for various factors. Consequently, the results and analysis should be considered exploratory and preliminary. The data for this study were attained from a sample of participants who were largely Caucasian and African American and included only a small percentage of youth from other racial groups; thus, generalizability to the larger population might be limited. Furthermore, data regarding certain sociodemographic factors, such as the total number of children in the home, the total number of foster care placements the participant had, and the length of time that the child resided in foster care prior to being a participant in the original study, were not attained.

Children living with a foster care provider may have encountered various practical lifestyle factors if they had resided in multiple foster care homes and/or were in and out of the child welfare system (Jones Harden et al., 2004). As a result, these practical lifestyle factors could have had a significant impact on the findings of this study affecting both internal and external validity. Overall, practical lifestyle factors encountered by children living in foster care were not controlled for, and thus one cannot conclude that those factors did not affect the results of the study.
In addition, the data for this study were collected over time; therefore, participation maturation may have been a threat to the internal validity as well. For these reasons, one cannot readily conclude that the results of this study are generalizable, especially to children living in foster care, as the characteristics of the foster care participant may vary from those living in the larger population. Furthermore, the age range of clients is fairly large involving children and adolescents; therefore, other confounds specific to certain age groups may have impacted the internal validity of the study. For instance, behavioral styles, coping styles, perspective-taking and cognitive development, and overall development are different when comparing young children to adolescents (Takahashi, Koseki, & Shimada, 2009). Studies have suggested that the type of trauma and the chronological age of the child have an impact on the processing of the traumatic experience, whether through external or internal processing coping mechanisms (Dekovic, 1999; Evans, Davies, & DiLillo, 2008; Moyland et al., 2010). In addition, as a result of the differences in cognitive development between children and adolescents, adolescents may have the ability to utilize formal operational thinking and more advanced executive functioning skills (Kuhn, 2006) with regard to their traumatic experience. They may view the traumatic event as one aspect of life, as opposed to a defining aspect of life although the literature regarding neuropsychological process and traumatic exposure coping among youth is limited (Aupperle, Melrose, Stein & Paulus, 2011).

The type of trauma, number of traumatic events, and length of time between the traumatic event and participating in treatment must also be considered. Multiple childhood traumatic experiences are known to have an adverse effect on the child’s
PTSD SYMPTOMS, TREATMENT ATTENDANCE and CAREGIVER SETTINGS

overall wellbeing (Anda et al., 2006), while childhood emotional, physical, and supervisory neglect have been associated with significant features of personality disorders during adolescence and early adulthood (Johnson, Smailes, Cohen, Brown, & Bernstein, 2000). This study does not take into account the possible impact of the type of trauma, number of traumatic experiences, and length of time between the traumatic experience(s) and treatment, although these factors may impact the child’s PTSD levels, treatment attendance, and ability to build positive relationships with caregivers (APA, 2000; Matsakis, 2004).

In order to measure treatment attendance, the operational definition of continuation in treatment was utilized, as this definition provided a continuous variable to monitor each participant’s treatment attendance. Treatment attendance monitored in this manner for the archival study, precluded the student researcher from determining the total number of sessions that each participant attended during the 3-, 6-, 9-, and 12-month assessment points. In other words, treatment attendance was not tracked concurrently with the UPID PTSD subscale scores and overall PTSD symptom severity score. Had treatment attendance been tracked at the same time as each follow-up assessment, a significant relationship may have been detected between symptom level and treatment attendance.

Future directions

Looking ahead to potential future directions, determining the type and number of traumatic experiences that children in both groups experienced appears to be advantageous. In doing so, researchers may be able to determine more closely the factor(s) that contribute to or exacerbate the child’s level of PTSD symptoms (Anda et
Future research geared towards children with PTSD living in foster care may also be fruitful for clinical application. For instance, the duration of the child’s placement, the number of foster care placements, the type of foster care setting, and details from the permanency plan may help to provide vital information that can be analyzed to determine if a relationship exists between the aforementioned areas and the reported level of PTSD symptoms.

The relationship between foster care providers and children in their care is an area of significant concern, and is a vital area of research, specifically regarding children with PTSD symptoms. Research suggests that the disruption in the child’s primary attachment is disruptive to the child’s biopsychosocial functioning (Morrison et al., 1999; Newtown et al., 2000), highlighting the importance of understanding how the child adjusts to a new and/or temporary caregiver-child relationship with a stranger who may have starkly different parenting styles from those of the primary non-foster caregiver(s). The utilization of a standardized assessment of relationship variables between foster caregivers and foster care children who have been diagnosed with PTSD would be valuable in helping to understand how this vulnerable population copes with the changes in parenting dynamics. Additionally, factors specific to the foster care provider, such as the number of training hours received, the type of training, the number of caregivers in the home, and the number of children in the home, may influence the foster caregiver-child relationship.

The amount of training and the quality of the training received by foster caregivers may play a tremendous role in their ability to respond effectively to a child’s needs, especially if there is a history of maltreatment, or the presence of significant
behavioral problems (Dorsey et al., 2008; Halfon & Klee, 1987; Hochstadt, Jaudes, Zimo, & Schraeder, 1987). According to a study conducted by Cuddeback and Orme (2002), the amount of training and the level of training offered to kinship and traditional foster caregivers were not adequate in addressing the needs of the children in their care. Whenan, Oxlad, and Lushington (2009) found that foster care training, parenting self-efficacy and the foster caregiver-child relationship were individual predictors of the foster caregiver’s well-being. In addition, foster caregiver satisfaction was significantly related to parenting self-efficacy, and the caregiver child relationship. Foster parent training has also shown to be beneficial in improving foster caregiver-child relationships, reducing the number of placement disruptions, reducing foster caregiver burn-out, and facilitating foster caregiver support through connections with the foster care agency, other foster caregivers, and other support services (Whiting, Huber, and Koech, 2007). Factors related to the maintenance of a foster caregiver-child relationship warrants further exploration of the foster caregiver’s interpersonal style and, distress tolerance ability, as well as of the temperament of the child and his or her specific behavioral health concerns. Adequate training, assessing the foster caregiver-child relationship, and understanding the interpersonal styles of the foster caregiver and the child are vital to future research.

The distinction for foster caregivers is that these stressors are compounded by the expectations developed by the foster agency (Buehler, Rhodes, Orme, & Cuddeback, 2006). Therefore, the number of caregivers in the foster care setting must be considered as having an impact on the ability of the caregiver(s) to effectively provide and respond to the youth’s needs. The literature that suggests that collaborative co-parenting, parents functioning as partners or opponents, helps to reduce externalizing behavioral problems
among children of intact (McConnell & Kerig, 2002; Schoppe, Mangelsdorf & Frosh, 2001) and divorced families (Cowan & McHale, 1996). The current literature incites the need for future research to analyze the impact of more than one foster caregiver in the home on the youth’s PTSD symptoms. The need for research on foster caregiver support in a home led by dual foster care parents is crucial, in that the advent of dual foster caregivers may help to distribute the number of responsibilities required to care for the child in foster care while reducing the amount of physical, emotional, and psychological strain on the caregiver.

Similarly, the number of children in the home may impact the amount of responsibility for the foster care provider, which may limit the amount of resources (e.g., time, attention, finances) that the foster caregiver can devote to each child. Farrington (2000) suggested that children who are raised in homes with several children may be more susceptible to detrimental experiences, especially if the child is not the eldest, and the level of risk is evident amongst children in foster care homes (Chamberlain et al., 2006) as well as non-foster care homes (Fuller, 2005). Future research might be devoted to examining if child maltreatment in foster care homes with multiple children is linked to caregiver characteristics or characteristics of the foster care children. An additional factor pertinent to the foster care home is the element of introducing a child into a foster care home, where the biological children of the foster caregiver are already present. The research is limited, although Heidbuurt (2004) suggested that this type of placement results in an adjustment for the child entering foster care, the foster care parents and their biological children. The following question remains: How then do the foster caregivers ensure that the needs of the children in their care are met effectively and efficiently?
In this study, both groups were compared to determine if there was a significant
difference in treatment attendance, although no significant difference was detected.
Based upon an overview of treatment attendance for each participant, the raw data
suggest that both groups had moderate to high retention rates. For this reason the specific
factors that promoted treatment attendance will be important to determine it will be
important to determine what specific factors promoted treatment attendance. The types
of factors which are present in hindering or maintaining consistent treatment attendance
may be related to internal or external barriers that require a more stringent analysis to
determine the impact, if any, on treatment attendance especially amongst a vulnerable
population of youth who have been exposed to some form of trauma (Nock & Ferriter,
2005).

The therapeutic relationship may be a key factor in helping to maintain treatment
for children presenting with PTSD symptoms. The therapeutic alliance is an ever-
evolving collaborative process that is constructed upon the internalized perception that
both the client and therapist possess of one another. In the study conducted by Kazdin,
Whitley, and Marciano (2005), the quality of the parent-therapist alliance and child-
therapist alliance positively predicted therapeutic change; while the parent-therapist
alliance also predicted improvements in parenting practices. In summary, this
information can be valuable to the researcher as well as to the clinician, who may devote
time to developing and designing treatment around specific internal and external barriers
in order to engage children diagnosed with PTSD in treatment consistently in the future.
The type of trauma, number of traumatic events, and length of time between the traumatic event and participating in treatment must also be considered. Multiple childhood traumatic experiences are known to have an adverse effect on the child’s overall well-being (Anda et al., 2006), while childhood emotional, physical, and supervisory neglect have been associated with significant features of personality disorders during adolescence and early adulthood (Johnson, Smailes, Cohen, Brown, & Bernstein, 2000). This study does not take into account the possible impact of the type of trauma, number of traumatic experiences, and length of time between the traumatic experience(s) and treatment, although these factors may impact the child’s PTSD levels, treatment attendance, and ability to build positive relationships with caregivers (APA, 2000; Matsakis, 2004).

In order to measure treatment attendance, the operational definition of continuation in treatment was utilized, because this definition provided a continuous variable to monitor each participant’s treatment attendance. Treatment attendance monitored in this manner for the archival study, precluded the student researcher from determining the total number of sessions that each participant attended during the 3-, 6-, 9-, and 12- month assessment points. In other words, treatment attendance was not tracked concurrently with the UPID PTSD subscale scores and overall PTSD symptom severity score. A significant relationship may have been detected between symptom level and treatment attendance if the symptom subscale scores and overall PTSD symptoms severity score were tracked concurrently with the UPID PTSD subscale scores.
Future directions

Looking ahead to potential future directions, it may be advantageous to determine the type and number of traumatic experiences that children in both groups experienced. In doing so, researchers may be able to more closely determine the factor(s) which contribute to or exacerbate the child’s level of PTSD symptoms (Anda et al., 2006). Future research geared towards children living in foster care with PTSD may also be fruitful for clinical application. For instance, the duration of the child’s placement, the number of foster care placements, the type of foster care setting, and details from the permanency plan may help to provide vital information which can be analyzed to determine if a relationship exists between the aforementioned areas and the reported level of PTSD symptoms.

The foster caregiver-child relationship between foster care providers and children in their care is an area of significant concern, and is a vital area of research, specifically regarding children with PTSD symptoms. Research suggests that the disruption in the child’s primary attachment is disruptive to one’s biopsychosocial functioning (Newtown, Litrownik, & Landsverk, 2000; Morrison et al., 1999). This highlights the importance of understanding how the child adjusts to developing a new and/or temporary caregiver-child relationship with a stranger who may have starkly different parenting styles from the primary non-foster caregiver(s). The utilization of a standardized assessment of relationship variables between foster caregivers and foster care children who have been diagnosed with PTSD would be valuable in helping to understand how this vulnerable population copes with the changes in parenting dynamics. Additionally, factors specific to the foster care provider such as, the number of training hours received, the type of
training, the number of caregivers in the home, and the number of children in the home may influence the foster caregiver-child relationship.

It is plausible to posit that the greater the amount of training and the quality of the training received by foster caregivers may play a tremendous role in their ability to respond effectively to a child’s needs, especially if there is a history of maltreatment, or the presence of significant behavioral problems (Dorsey et al., 2008; Halfon & Klee, 1987; Hochstadt, et al, 1987). According to a study conducted by Cuddeback and Orme (2002), the amount of training and the level of training offered to kinship and traditional foster caregivers were not adequate in addressing the needs of the children in their care. Whenan, Oxlad, and Lushington (2009), found that foster care training, parenting self-efficacy and the foster caregiver-child relationship were individual predictors of the foster caregiver’s well-being. In addition, foster caregiver satisfaction was significantly related to parenting self-efficacy and the caregiver child relationship. Foster parent training has also shown to be beneficial in improving foster caregiver-child relationships, reducing the amount of placement disruptions, reducing foster caregiver burn-out, and facilitating foster caregiver support through connections with the foster care agency, other foster caregivers, and other support services (Whiting, Huber, and Koech, 2007). Factors related to the maintenance of a foster caregiver-child relationship warrants further exploration of the foster caregiver’s interpersonal style, distress tolerance ability, as well as the temperament of the child and their specific behavioral health concerns. The need for adequate training, the foster caregiver-child relationship, as well as the interpersonal styles of the foster caregiver and the child are vital to future research in examining if
these factors have an influence on the child’s biopsychosocial functioning and/or treatment attendance.

The stressors placed upon foster caregivers are comparable to those of non-foster caregivers in that they must balance their personal needs with the needs of a child who may require specific needs and care. The distinction for foster caregivers is that these stressors are compounded by the expectations developed by the foster agency (Buehler, Rhodes, Orme, & Cuddeback, 2006). Therefore, it is beneficial to consider if the number of caregivers in the foster care setting has an impact on the ability of the caregiver(s) to effectively provide and respond to the youth’s needs. Drawing from the literature which suggests that collaborative co-parenting, parents functioning as partners or opponents, helps to reduce externalizing behavioral problems among children of intact (McConnell & Kerig, 2002; Schoppe, Mangelsdorf & Frosh, 2001) and divorced families (Cowan & McHale, 1996). This incites the need for future research to analyze the impact of more than one foster caregiver in the home on the youth’s PTSD symptoms. The need for research on foster caregiver support in the role of a dual foster care parent led home is crucial, in that the advent of dual foster caregivers may help to distribute the amount of responsibilities required to care for the child in foster care while reducing the amount of physical, emotional, and psychological strain on the caregiver.

Similarly, the number of children in the home may impact the amount of responsibility for the foster care provider, which may limit the amount of resources (e.g. time, attention, finances) that the foster caregiver can devote to each child. Farrington (2000) suggests that children who are raised in homes with several children may be more susceptible to detrimental experiences situations especially if the child is not the eldest,
and this is evident amongst foster care homes (Chamberlain, Price, Reid, Landsverk, Fisher, & Stoolmiller, 2006) as well as non-foster care homes (Fuller, 2005). Future research might be devoted to examining if child maltreatment in foster care homes with multiple children is linked to caregiver characteristics or characteristics of the foster care children. An additional factor pertinent to the foster care home is the element of introducing a child into a foster care home, where the biological children of the foster caregiver are already present. The research is limited, although, Heidbuurt (2004) suggests that this type of placement results in an adjustment for the child entering foster care, the foster care parents and their biological children. With this in mind, the question remains, how then do the foster caregivers ensure that the needs of the children in their care are met effectively and efficiently?

In this study, both groups were compared to determine if there was a significant difference in treatment attendance, although no significant difference was detected. Based upon an overview of treatment attendance for each participant the raw data suggests that both groups had moderate to high retention rates. For this reason it will be important to determine what specific factors promoted treatment attendance. The types of factors which are present in hindering or maintaining consistent treatment attendance may be related to internal or external barriers that require a more stringent analysis to determine the impact, if any, on treatment attendance especially amongst a vulnerable population of youth who have been exposed to some form of trauma (Nock & Ferriter, 2005).

The therapeutic relationship may be a key factor in helping to maintain treatment for children presenting with PTSD symptoms. The therapeutic alliance is an ever-
evolving collaborative process which is constructed upon the internalized perception that both the client and therapist possess of one another. In the study conducted by Kazdin, Whitley, and Marciano (2006) the quality of the parent-therapist alliance and child-therapist alliance positively predicted therapeutic change; while the parent-therapist alliance also predicted improvements in parenting practices. In summary, this information can be valuable to the researcher as well to the clinician who may devote time in developing and designing treatment around specific internal and external barriers in order to engage children diagnosed with PTSD in treatment consistently in the future.
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ILDRENFORPTESANDPTDSYMPOMSINPEIDRICSETINGS


Appendix A
Appendix B