

THE VALIDATION OF THE TRAUMA ASSESSMENT
FOR YOUNG CHILDREN

by

HEIDI LYNNE HARTMANN STRICKLER

Presented to the Faculty of the Graduate School of
The University of Texas at Arlington in Partial Fulfillment
of the Requirements
for the Degree of

DOCTOR OF PHILOSOPHY

THE UNIVERSITY OF TEXAS AT ARLINGTON

May 2011

ACKNOWLEDGEMENTS

I would like to first thank my children and husband for having the patience, love, and support to help me through this process. Next, I would like to acknowledge and thank the children who participated in my study. It takes a great deal of courage to talk to an adult about issues and experiences in life, especially a stranger, so I want to thank all of the children who talked to me and Scampi about the bad, sad, scary things they experienced. I would like to express my great appreciation to Evelyn Dilman, who began as my funded graduate assistant and continued to assist with this project even after the funding was discontinued. I would like to thank my friends and colleagues, Tammy Molina-Moore, LaJuana Hector, Claudia Rappaport, and Ellen Murphy for their words of encouragement, regularly adjusting teaching schedules, and providing listening ears. Finally, I would like to thank Norman Cobb for being willing to step in as chair of my committee during the second year of my dissertation, and thank Peter Lehmann, Cathleen Jordan, Claudia Rappaport, and Debra Woody for being willing to serve on my dissertation committee.

April 21, 2011

ABSTRACT

THE VALIDATION OF THE TRAUMA ASSESSMENT FOR YOUNG CHILDREN

Heidi Lynne Hartmann Strickler, Ph.D.

The University of Texas at Arlington, 2011

Supervising Professor: Norman Cobb

Young children experience a variety of traumatic experiences ranging from divorce and witnessing family violence, to living with parents who have addictive behaviors, to experiencing severe illness and injury, to experiencing population wide traumas, to experiencing physical or sexual abuse or other forms of child maltreatment. Young children between the ages of 3 and 7 are in the preoperational stage of cognitive development and consequently process these experiences in a different manner than adults. As a result, assessment measures need to take this cognitive processing into account and look at the children's views of their experiences. Psychosocial development is equally important in the development of assessment instruments, since children in this age group are within Erikson's stages of initiative versus guilt and industry versus inferiority, so they are beginning to develop their own opinions and representations of the world. Assessment instruments also need to communicate with children on their own level, which at this age, is through play. The current study developed an assessment instrument of trauma symptoms in young children based on a combination of the American Psychiatric Association's diagnostic criteria for Post-Traumatic Stress Disorder (PTSD), recommendations

for alternative diagnostic criteria for PTSD in preschool children, and theoretical literature related to complex trauma and developmental trauma disorder in young children. The Trauma Assessment for Young Children was tested in a control sample of children from an area Head Start Center and a designated trauma sample from children's advocacy centers and domestic violence shelters. The purpose of the study was to validate the Trauma Assessment for Young Children. The Trauma Assessment for Young Children had good test-retest reliability. The measure was found to have moderate internal consistency on both the child-report and caregiver-report versions, with higher levels in the caregiver report. The Trauma Assessment for Young Children had good convergent validity with the Trauma Symptom Checklist for Young Children's PTSD subscale. It demonstrated good discriminant validity with the Child Behavior Checklist's externalizing subscales (attention, aggression, and total externalizing). Finally, the Trauma Assessment for Young Children demonstrated known groups validity on the caregiver-report version of the measure, indicating that it has the ability to differentiate between the children who have and have not experienced trauma. These results are promising for the future utility of the measure with children who have experienced a trauma; however, the sample size was small; therefore, implications for future research are discussed, as well as, implications for social work policy and practice.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
ABSTRACT	iii
LIST OF TABLES	x
Chapter	Page
1. INTRODUCTION.....	1
2. LITERATURE REVIEW	7
2.1 Behavioral Implications of Specific Traumas	7
2.1.1 Family Discord (Divorce & Witnessing Domestic Violence).....	8
2.1.2 Children of Addicted Parents	9
2.1.3 Children Who Have Experienced Illness, Injury, Hospitalization	9
2.1.4 Grief.....	10
2.1.5 Physical Abuse & Neglect.....	10
2.1.6 Sexual Abuse	11
2.1.7 General Child Maltreatment (Non-Type Specific	12
2.1.8 Population Wide Trauma.....	13
2.1.9 Critique of Specific Trauma Literature	14
2.2 Behavioral Implications of General Trauma.....	18
2.2.1 Age Differences.....	18
2.2.2 Play & Art Themes	19
2.2.3 Memory, Recall, & Arousal.....	20

2.2.4 Critique of General Trauma Literature	22
2.3 Behaviors Related to Diagnosis	25
2.3.1 Developmental Trauma Disorder	25
2.3.2 Complex Trauma.....	26
2.3.3 Complex PTSD (Disorders of Extreme Stress NOS)	28
2.3.4 Critique of the Diagnostic Trauma Literature	31
2.3.5 DSM-IV-TR.....	32
2.3.5.1 Feeding Disorders.....	33
2.3.5.2 Elimination Disorders	33
2.3.5.3 Selective Mutism	34
2.3.5.4 Eating Disorders.....	35
2.3.5.5 Adjustment Disorders.....	36
2.3.5.6 Mood Disorders.....	36
2.3.5.7 Behavior Disorders.....	37
2.3.5.8 Attachment Disorders.....	38
2.3.5.9 Anxiety Disorders	39
2.3.6 Critique of Literature Related to DSM-IV-TR Diagnoses	40
2.3.6.1 Elimination Disorders	40
2.3.6.2 Selective Mutism	41
2.3.6.3 Eating Disorders.....	41
2.3.6.4 Mood Disorders.....	42
2.3.6.5 Behavior Disorders.....	43
2.3.6.6 Attachment Disorders.....	44
2.3.6.7 Anxiety Disorders	45
2.4 Theoretical Underpinnings of Early Childhood Trauma	46
2.4.1 Description of Post-Traumatic Stress Disorder.....	47

2.4.2	Theoretical Description of Alternative PTSD Criteria	48
2.4.3	Description of Complex Trauma	52
2.4.4	Description of Developmental Trauma Disorder	54
2.4.5	Theoretical Underpinnings of Childhood Trauma and Loss.....	55
2.4.6	Theoretical Underpinnings of Attachment Theory	56
2.4.7	Theoretical Underpinnings of Young Children’s Psychosocial Development.....	60
2.4.8	Theoretical Underpinnings Based on Cognitive Development	62
2.4.9	Theoretical Framework for the Assessment Instrument	65
2.5	The Use of Testing Instruments in Young Children	68
2.5.1	Measures Related to Emotional and Behavioral Problems	68
2.5.2	Trauma Specific Measures	75
2.6	Present Study.....	79
3.	METHOD.....	81
3.1	Participants.....	82
3.1.1	Clinical Sites.....	83
3.1.2	Sampling Procedure.....	85
3.2	Experience and Training of Interviewers.....	86
3.3	Assessment Measures	88
3.3.1	The Child Behavior Checklist.....	88
3.3.2	The Trauma Symptom Checklist for Young Children	89
3.3.3	The Trauma Assessment for Young Children.....	90
3.3.3.1	Creation of the Measure	90
3.3.3.2	Assessment Measure.....	91
3.3.3.2.1	Question 1.....	92
3.3.3.2.2	Question 2.....	92
3.3.3.2.3	Question 3.....	93

3.3.3.2.4 Question 4.....	94
3.3.3.2.5 Question 5.....	94
3.3.3.2.6 Question 6.....	95
3.3.3.2.7 Question 7.....	96
3.3.3.2.8 Question 8.....	97
3.3.3.2.9 Question 9.....	98
3.3.3.2.10 Question 10.....	98
3.3.3.3 Administration of the Test Measure	99
3.3.3.4 Initial Testing	99
3.3.3.5 Results for the Initial Testing.....	100
3.3.4 Current Measure	103
3.4 Test Procedures.....	104
3.5 Data Analysis	106
4. RESULTS.....	112
4.1 Participants.....	112
4.2 Descriptive Statistics for the TAYC	115
4.3 Inferential Statistics of Demographic Data.....	117
4.4 Correlation Between Caregivers & Children	118
4.5 Psychometric Properties of the TAYC	119
4.5.1 Test-Retest Reliability	119
4.5.2 Internal Consistency.....	120
4.5.3 Convergent Validity	121
4.5.4 Discriminant Validity.....	122
4.5.5 Known Groups Validity.....	124
4.6 Conclusions.....	125

5. DISCUSSION	126
5.1 Descriptive Statistics	126
5.2 Strengths of the Study.....	128
5.2.1 Reliability Strengths	128
5.2.2 Validity Strengths	130
5.2.3 External Validity Strengths	133
5.2.4 Overall Strengths	133
5.3 Limitations of the Study.....	135
5.3.1 Overall Limitations.....	135
5.3.2 Validity Limitations	135
5.3.3 External Validity Limitations	136
5.4 Implications of the Study.....	137
5.4.1 Implications for Social Work Practice.....	137
5.4.2 Implications for Social Policy.....	139
5.4.3 Implications for Future Research	140
5.5 Conclusions.....	144
APPENDIX	
A. ORIGINAL TRAUMA ASSESSMENT FOR YOUNG CHILDREN	147
B. THE TRAUMA ASSESSMENT FOR YOUNG CHILDREN	165
REFERENCES.....	182
BIOGRAPHICAL INFORMATION	199

LIST OF TABLES

Table	Page
2.1 Behaviors of Traumatized Children	16
2.2 Comparison of Developmental Trauma Disorder & Complex Trauma	30
3.1 Frequencies & Modes for Initial Child Report	101
3.2 Frequencies & Modes for Initial Caregiver-Report.....	101
4.1 Adults in Household	113
4.2 Children’s Sibling Statuses	113
4.3 Household Income Levels.....	114
4.4 Frequencies of Co-Occurring Psychiatric Diagnoses	115
4.5 Frequencies of Children’s Ethnicities	115
4.6 Score Range, Mean, & Standard Deviation Of the Child Report TAYC.....	116
4.7 Score Range, Mean, & Standard Deviation Of the Caregiver Report TAYC	116
4.8 ANOVA for Differences Among Ethnicities Of TAYC, TSCYC, and CBCL Subscales	118
4.9 Pearson’s r Correlation Results Between Caregiver- Report & Child-Report TAYC	119
4.10 Correlation of the TAYC with the TSCYC PTSD Subscale for Convergent Validity	122
4.11 Correlation of the TAYC with the CBCL Subscales for Discriminant Validity.....	123

CHAPTER 1

INTRODUCTION

Childhood has been thought to be a time of blissful innocence; however, in today's society, children are often exposed to situations that they are little prepared to handle. Consequently, children are at risk for experiencing traumatic situations for which they have limited coping skills. This lack of coping skills places children, especially young children who are developmentally even less ready, at risk for a myriad of problems in their daily functioning. Typically these problems include sleeping disruption, nightmares, appetite changes, clinginess, attachment difficulty, academic problems, and other biopsychosocial development impairment (Cook, Spinazzola, Ford, Lanktree, Blaustein, et. al., 2005; Van der Kolk, 2005).

One of the key components to understanding childhood trauma is that children's thought processes are very different from adults. While adults often need to feel as though their lives or other people's lives are literally being threatened by trauma, children experience trauma on a day to day level through chaotic environments or upheavals in daily living. This difference is largely due to children's developmental level of cognitive functioning (Steele & Raider, 2001). Most adults are in Piaget's stage of formal operational thought and able to engage in abstract reasoning to determine that chaos, inconsistency, and change are actually constants and not a threat to their existence. Children, on the other hand, do not possess this ability, and consequently, view these things as potential threats. Therefore, when children experience divorce, multiple moves, inconsistent discipline, conditional love, and so forth, they can become threats to their identity and become an internalized traumatic experience (Steele & Raider, 2001)

In addition to these experiences of trauma, children experience a wide variety of interpersonal traumas. Children frequently endure abuse (either physical, emotional, and/or sexual), neglect, and multiple moves, are removed from their homes, live with caregivers who have addictions, mental health, or personality problems, or witness domestic violence. Some other types of trauma that children experience include a loved one's serious illness or injury, attempted or completed homicide or suicide, and the death of a loved one, including pets. Although statistics are not available for all of these types of trauma, the data on abuse and neglect indicate the high level of trauma experienced by children in today's society. According to the Administration for Children and Families (ACF) 2006 fact sheet, over 3.6 million reports were made regarding approximately 4.5 million children during the data collection year (ACF, 2006). Of these reports 905,000 children were found to be the victims of abuse or neglect. The types of abuse or neglect included in the report were neglect, physical abuse, sexual abuse, emotional abuse, and medical neglect (ACF, 2006). In addition, almost four children die daily as a result of child abuse or neglect (ACF, 2006). ACF also reported that children ages 0-3 are in the most danger of being abused or neglected followed by children ages 4-7. In addition, because of their level of cognitive development, they do not yet possess the ability to understand various changes in their lives and consequently may feel threatened when said changes occur, leaving them potentially predisposed to perceiving that other life events are traumatic (Steele & Raider, 2001).

Since varying types of trauma occur in young children, accurate assessments of trauma symptoms are vitally important. Children who experience trauma have been identified to experience a gamut of symptoms. These symptoms have been categorized to fall into the ranges of several areas of dysfunction, such as interpersonal dysfunction, somatic dysfunction, cognitive dysfunction, behavioral dysfunction, self-concept dysfunction, dissociative dysfunction, and affective dysfunction (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Further symptoms have been recognized when children who experience trauma

develop post-traumatic stress disorder (PTSD), and co-morbid mental disorders, particularly in the areas of mood disorders, behavioral disorders, attachment disorders, anxiety disorders, and eating disorders (Strickler, 2001).

Since children who have experienced trauma have such a variety of symptoms, the appropriate assessment of these symptoms becomes a pressing matter. The assessment of trauma symptoms in young children, which for the purposes of this paper covers children ages 3-7 is a difficult manner. Some of the challenges involved in assessing these children are related to their cognitive development. These children are in the preoperational and concrete operational thought stages of cognitive development. As a result, their perception of events differs from adults because they do not have the ability to engage in abstract thinking, reasoning, planning, and decision-making. Further, their verbal communication skills are less developed than adults, so their primary means of communication is through play (Landreth, 2002). The accurate assessment of children who have experienced trauma must include methods that take into account how they differ cognitively from adults and incorporate play as their means of communication. The psychosocial developmental of children must also be taken into account for accurate assessment to occur. Children at these ages are in either the initiative versus guilt or industry versus inferiority stage of psychosocial development (Hamachek, 1985). These stages are important to consider during the assessment process because children who have experienced trauma and children who have not are attempting to assert their independence and accomplish tasks on their own (Hamachek, 1985). Consequently, assessment measures should allow children the opportunity to make simple decisions on their own through the communication method that is age-appropriate.

In addition to the developmental considerations for assessing children who have experienced trauma, the use of self-report measures in young children needs to be developed. Self-report measures are vital in the area of trauma research with children because caregiver-report measures may not be accurate accounts of the children's symptoms. Caregiver-report

measures run the risk of not accurately portraying children's symptoms because caregivers are often unaware that internalizing symptoms, such as anxiety, withdrawal, etc. are problematic (Chrisman, Egger, Compton, Curry, & Goldston, 2006).. Rather, caregivers tend to be more in-tune with externalizing and acting out symptoms because these symptoms cause problems for the caregivers. Consequently, since many trauma symptoms involve internalizing behaviors, caregivers may underestimate the problems children are having. (Chrisman, et. al., 2006). Another important issue with caregiver-report measures arises due to the area of study being trauma. Caregivers often experience trauma in their own lives, either at the same time as their children, or in separate events. Consequently, caregiver-report measures can be invalidated through caregivers projecting their own symptoms on to their children, thereby, exaggerating the children's symptoms (Almqvist & Broberg, 2003). Conversely, when caregivers have experienced their own trauma, it is frequently difficult for them to attend to their children's issues because they have been impacted by their own trauma symptoms. When this situation occurs, caregivers tend to not have observed the trauma symptoms in the children due to avoidance of the children because of trauma reminders, the caregivers' own avoidance symptoms, and general dissociative symptoms. As a result, caregiver-report measures can be invalidated through caregivers underestimating children's trauma symptoms (Almqvist & Broberg, 2003). A further concern with caregiver-report measures is that caregivers use adult-communication methods, abstract reasoning, and interpretation; whereas, children use play to communicate, do not possess the developmental to engage in abstract reasoning, and consequently interpret experiences differently. Therefore, the probability occurs that adults perceive events and symptoms differently than children do. This difference in perception and even symptom development has led to alternative criteria for PTSD to be proposed for preschoolers (Scheeringa, Zeanah, Drell, & Larrieu, 1995; Scheeringa, Zeanah, Myers, & Putnam, 2003; Scheeringa, Zeanah, Myers, & Putnam, 2005). Since the development of alternative criteria for

PTSD has been empirically tested, the development of a self-report measure for young children becomes another step toward helping these vulnerable youth.

The development of self-report measures in this area is important for social work researchers and practitioners for several reasons. Children who have experienced trauma are a vulnerable population and consequently one that is of interest and an ethical obligation to social workers. The creation of self-report measures for this population can assist in answering the ethical call to social justice by providing traumatized children with a voice, something that is a mandate in social work practice and research (National Association of Social Workers, 2008). The creation of measures by social workers is a needed area in social work research as social workers are attentive to areas of social justice, diversity, and the needs of the research participant. The area of traumatized children is extremely important in the social work profession because accurate assessment can help social work practitioners provide research-informed practice; it can lead to early detection and amelioration of symptoms, and it can provide children with opportunities for less difficulty in later life. The accurate assessment of traumatic experiences in children's lives is an essential part of social work research as well since the Council on Social Work Education (CSWE) has mandated that social workers learn the importance of practice-based research and research-based practice (CSWE, 2008). The development of such measures by social workers assists with the assurance that future social workers will have a solid foundation in the area of reliable and valid measures that assist with the assessment of the populations with which social workers work, especially those that are most vulnerable.

The purpose of this research is to develop and validate a self-report instrument to assess for trauma symptoms in children ages 3-7 based on literature review that explores the correlates of behavioral and biopsychosocial functioning in traumatized children. Specifically, the research sought to develop a measure, entitled the Trauma Assessment for Young Children, which would assess the severity of trauma symptoms in children who had already

been identified as having experienced a traumatic occurrence, specifically some type of interpersonal trauma. The researcher hoped that the development of this scale would not only produce positive psychometric properties but provide valuable clinical utility, as well by providing vulnerable children with a means of sharing their traumatic symptoms. The scale would then provide clinicians with a child-friendly means of assessing the severity of the children's trauma symptoms in a way that would not be affected by the caregiver's perceptions.

The following chapters provide a description of the present study. The next chapter provides a literature review, which includes a description of behavioral correlates in children who have experienced trauma, both general trauma and specific types of trauma. The literature review includes a description of how psychiatric diagnoses may be related to traumatic experiences and behaviors in children. A review of child-development and trauma specific literature as it relates to ages 3-7 is provided, since this is the age group for which the present measure was designed. Finally, a review of both behavioral and trauma specific measurement instruments is completed. The third chapter provides a description of the methodology used to complete the present study. This chapter details the making of the Trauma Assessment for Young Children, the clinical sites from which participants were selected, the design of the instrument itself, the procedure that was used to assess the children, concurrent measures that were completed by caregivers, and the plan for data analysis. The fourth chapter presents the results that were found based on the demographic and descriptive analysis of the study participants' responses, as well as, the psychometric testing of the instrument. Finally, the final chapter presents a discussion of the findings, the study's overall strengths and limitations, and implications for social work practice, social policy, and future research. Lastly, a conclusion about the clinical utility of the Trauma Assessment for Young Children is presented.

CHAPTER 2

LITERATURE REVIEW

As noted in the previous chapter, children can be traumatized in many ways. In today's society children are often traumatized by physical, sexual, or emotional abuse, neglect, homicide, suicide, divorce, experiencing multiple moves, being removed from their homes, experiencing critical/serious illnesses or accidents, and experiencing the death of a loved one.

In addition to having high numbers of children traumatized each year, the effects of different types of trauma can be monumental. Therefore, social workers must understand the effects varying types of trauma can have on young children. For the purposes of this research, young children are considered to encompass children ages 3-7; however, because of a dearth of literature available for this very specific age group, at times behavioral, diagnostic, and neurobehavioral effects will be incorporated from the existing literature on close age groups – i.e. toddler and school age (encompassing all preschool and elementary school years). Initially, the emotional, behavioral, and cognitive effects of specific types of trauma will be explored. Then a more global exploration of trauma that has led to suggested alternative diagnostic criteria for interpersonal trauma will be presented. These alternative diagnostic criteria, their observable components, and specific diagnostic correlates will follow. Finally, the implications for social work research, practice, and policy in relation to trauma and young children will be discussed.

2.1 Behavioral Implications of Specific Traumas

Young children are vulnerable to multiple types of trauma because of their developmental level. At times, this vulnerability is caused by their smaller physical stature. At

other times, it is caused by their inability to cognitively process troubling experiences. These developmental stages often leave children perceiving events as threats to safety and security as a traumatic event; whereas, adults may perceive them as an ordinary or upsetting occurrences (Strickler, 2007). Consequently, for children traumatic occurrences range from divorce, grief, illness/injury, and parental substance use (whether the consequent neglect, embarrassment, or lack of biopsychosocial stimulation) to repetitive physical and/or sexual abuse, terrorism, natural disaster. While traumatic experiences have overarching behavioral similarities, particularly if they become clinically pathological, some of the individual differences in specific types of trauma must be explored.

2.1.1 Family Discord (Divorce & Witnessing Domestic Violence)

Children whose parents divorce often experience feelings of insecurity and abandonment, as well as, anger, blame, anxiety, fear, and depression. They tend to experience more behavioral difficulties in the realms of social and academic skills compared with peers whose parents are not divorced (Kenny, 2000). When parental discord is taken to a higher level and children witness domestic violence, traumatic issues often increase. Stover, Van Horn, and Lieberman (2006) found preschool boys who witnessed domestic violence and no longer in an intact family make more negative maternal representations during play. The representations are more frequent when the boys have decreased visitation with their fathers.

Additionally, fathers were often absent (not included in the child's play representation) during play. The severity of violence did not impact how the father was represented in the play. Finally, children who had witnessed domestic violence were more likely to portray themselves in a caretaking role and less likely to incorporate parental figures in their play than children who had not witnessed domestic violence (Stover, et. al., 2006). According to Lieberman, Van Horn, & Ippen, (2005) children who witness domestic violence demonstrate problems in the realms of social, emotional, and cognitive functioning. These children can experience additional problems due to either harsher treatment by the abused parent or avoidance by the abused parent due to

feelings of guilt, which leads to confusion and internalized blame in the child (Lieberman, et. al., 2005). In preschool and early elementary school age children, these symptoms are difficult to ascertain because of the reliance on parental report measures and the tendency for parents to be unaware of internalization of child problems, and some projection issues on the part of parents (Lieberman, et. al., 2005). Although Stover, et. al., (2006) and Lieberman, et. al. (2005) empirically studied children who witnessed domestic violence, difficulty arises with the generalizability of their respective findings since each research group utilized samples with confirmed cases of domestic violence and frequently victims of domestic violence do not report the situation to authorities. Liberman, et. al. (2005) included children who had experienced multiple traumas, such as witnessing domestic violence and being the victim of child abuse, making it difficult to ascertain if the symptoms were solely related to witnessing domestic violence. Despite these limitations, the behavioral implications noted help develop the empirical knowledge base about the impact of witnessing domestic violence (Lieberman, et. al., 2005; Stover, et. al., 2006).

2.1.2 Children of Addicted Parents

Families also experience difficulty when one of their members has problems with addiction. According to the theoretical literature, children of alcoholics tend to experience trauma because of the addictive behaviors of their parents and demonstrate behaviors associated with aggression, lack of control, and impulsivity (Carmichael & Lane, 1997). They experience emotions associated with shame, depression, fears of abandonment, feelings of worthlessness, and emotional lability. Frequently, children will be untrusting, have rigid role expectations, and difficulty with self-control and self-regulation (Carmichael & Lane, 1997).

2.1.3 Children Who Have Experienced Illness, Injury, or Hospitalization

As a result of living in a chaotic family or merely because of the natural course of life, children experience illness and injury and require medical treatment. Experiencing hospitalization, invasive medical procedures, or witnessing a loved one experience these things

can be traumatizing for children. In a qualitative study, Wikstrom (2005) found that hospitalized children tend to demonstrate themes of fear, powerlessness, and a need for belonging through play and art. Wikstrom's (2005) research was theoretically sound; however, it utilized a small sample in an area where great emphasis is placed on the entire well-being of the child during medical treatment. It would be beneficial to replicate this study in areas without socialized medicine where the mandate to allow children the access to play therapy is not as routinely followed to determine if similar results are achieved.

2.1.4 Grief

Loss of a loved one, divorce, domestic violence, having an addicted parent, and experiencing illness/injury can all lead to an experience of grief or loss. St. Thomas and Johnson (2002) through a combination of theory and clinical/case study work at the Center for Grieving Children have also found that for children, losing a loved one often includes losing a family pet, and depending on how this experience is handled, it can be as traumatic as any of the previously mentioned losses. Children experiencing trauma related to grief and loss issues exhibit anger, depression, grief, confusion, anxiety, low-self-esteem, and difficulty with social skills and interpersonal relationships (St. Thomas & Johnson, 2002).

2.1.5 Physical Abuse & Neglect

Just as children experience trauma within the family or through grief and loss, a combination of these traumas often occurs through abuse or neglect. Based on a review of the literature, Corcoran (2000) found that physically abused children also tend to demonstrate behavioral symptoms including a lack of social skills, impulsivity, and difficulty concentrating. These three issues then result in impaired academic and interpersonal functioning. They also tend to have depression, anger, and low self-esteem. In clinical assessment, Horton and Cruise (1997) found that physically abused children become hypervigilant and defensive as they view the world as a negative and dangerous place.

Children who experience physical abuse have increased attention and hypervigilance to cues for anger (Shackman, Shackman, & Pollack, 2007). They typically perceive, categorize, and more accurately identify angry facial expressions than do their same age peers. They also exhibit greater difficulty removing attention from angry individuals (Shackman, et. al., 2007). When compared to non-abused controls, physically abused children spend greater effort attending to anger cues and withhold attention from other irrelevant yet necessary information in the environment. Physically abused children also tend to label nondescript expressions as anger, especially when these expressions are produced by their mothers. Finally, physically abused children attend more to verbal anger than to facial anger and demonstrate increased anxiety when verbal anger is being perceived by the children than did non-abused controls (Shackman, et. al., 2007). Although Shackman, et. al. (2007) demonstrated behavioral and emotional indicators of physically abused children, the study was limited by utilizing only identified and confirmed abuse cases and only those cases in which the mother was the abuser. Children may respond differently with fathers or stepparents who are abusers. Further, the authors did not reveal the ethnic backgrounds of the participants. Since different ethnic groups respond differently to facial and verbal responses, differences in responses by different ethnic groups should be assessed (Shackman, et. al., 2007).

In clinical assessment, neglected children tend to exhibit anxiety and inattention. They may appear helpless or passive when distressed (Horton & Cruise, 1997). They tend to lack initiative in academic settings and often demonstrate difficulty with comprehension; therefore, they experience difficulty with functioning in the school environment (Corcoran, 2000).

2.1.6 Sexual Abuse

In contrast, literature based on clinical practice indicates that children who have experienced sexual abuse often engage in self-destructive or assaultive behavior. Frequently they repeat the offender's behavior by sexually acting out (Rasmussen & Cunningham, 1995). Another factor that often complicates children who have experienced sexual abuse is the

differential outcome of symptoms that often occurs (Saywitz, Mannarino, Berliner, & Cohen, 2000). Some children experience no difficulties on standardized measures; some experience mild clinical difficulty; while still others have serious psychiatric symptoms (Saywitz, et. al., 2000). Finally, children have full-blown post-traumatic stress disorder (PTSD), and others have a “sleeper effect” where their symptoms do not become apparent until at least a year after disclosing the abuse (Saywitz, et. al., 2000). For children who present with difficulties, literature based on theoretical and clinical experience demonstrates that the immediate effects of child sexual abuse include low self-esteem, anxiety, depression, fear, hypervigilance, increased arousal, anger, withdrawal, aggression, self-injury, increased belief that the world is dangerous and that the child is damaged or worthless, sexualized play or masturbation, inappropriate sexual knowledge, and sexual aggression (Horton & Cruise, 1997). The longer-term effects of child sexual abuse often include depression, extremely high generalized anxiety, low self-esteem, self-destructive behavior, difficulties in relationships due to trust and intimacy issues, negative self-perception, continuing to believe the world is a dangerous place, and dissociation (Horton & Cruise, 1997).

2.1.7 General Child Maltreatment (Non-Type Specific)

Regardless of the type of abuse that children experience, they demonstrate certain themes in play and art that become apparent to the clinicians with whom they work. Frequently, themes of helplessness and aggression arise (Stronach-Bushel, 1990). However, other themes include superheroes who are powerful and good, but can be separated into victim heroes and seeker heroes (Haen & Brannen, 2002). Victim heroes tend to have been taken from their homes and become powerful despite feelings of abandonment and alienation (Haen & Brannen, 2002). Seeker heroes, on the other hand, tend to be focused on leaving home in search of adventure (Haen & Brannen, 2002). Monsters are also prevalent in abused children’s art and play. They can be destructive yet helpful by bringing knowledge or exciting activity (Haen & Brannen, 2002). Babies also dominate and symbolize regression and the need for re-parenting

and nurturance (Haen & Brannen, 2002). The limitation of the qualitative assessment of art and play themes in traumatized children's therapeutic work is that it is difficult to generalize both to other children due to the small sample size and to types of trauma. Since the children used in each study had experienced some type of maltreatment, it is unlikely to assume that they had experienced only a single-incident trauma; therefore, researchers, cannot determine what themes are prevalent for which type of trauma or which themes are prevalent for short- versus long-term exposure (Haen & Brannen, 2002; Stronach-Bushel, 1990).

2.1.8 Population Wide Trauma

The types of trauma discussed above are the traumas that most frequently affect young children. They are interpersonal in nature and occur at an alarming rate; however, children also experience population-wide traumas (PWT). These traumas are defined as "traumatic events experienced by a significant portion of society, which negatively impact the overall emotional health of many members of that society" (Bender & Sims, 2007, p.41). Children are affected by PWT through events such as natural disasters and war. Children who experience PWT exhibit fear for themselves and their friends and relatives and a sense of loss (Bender & Sims, 2007). Observations from recent PWT have led to patterns of crying episodes, describe a pervasive sense of sadness, demonstrate emotional lability, aggressive outbursts, sleep disturbance, clingy or whiney behavior, and have somatic complaints (Bender & Sims, 2007). They may make statements related to thoughts of death or fears for safety and display regression toward behaviors associated with a younger age (Bender & Sims, 2007). Clinical observation combined with developmental theory demonstrates different behaviors based on age as a result of experiencing PWT. Very young children, ages 3-5, will predominantly display sleep disturbances, clingy/whiney behavior, temper tantrums, and be increasingly anxious about separations (Alkhatib, Regan, & Barret, 2007). Elementary school age children, approximately ages 5-12, will display nightmares, engage in re-enactments, either through play or daily activities, become hypervigilant, remain in a state of arousal, become aggressive, complain of

stomach aches or headaches, experience changes in appetite, begin to have problems at school, have difficulty concentrating, and have intrusive thoughts or a preoccupation with the traumatic event (Alkhatib, et. al., 2007). Children in this age group will also often become concerned with safety and danger, exhibit school refusal behaviors, and mimic parental reactions (Alkhatib, et. al., 2007). Children who have experienced PWT have demonstrated specific themes in their play and art. Themes related to war are expressed in relation to safety, destruction, and reconstruction, and the use of roads and islands (Kalmanowitz & Lloyd, 1999). While themes of roads can be related to themes of deconstruction and reconstruction, the researchers and clinicians were unable to identify the nature of the themes of islands other than the contradictions that trauma can manifest in children (Kalmanowitz & Lloyd, 1999). Children who have experienced a natural disaster repeatedly depict black suns in their art work; in addition, those children who have experienced hurricanes or tsunamis often engage in play or art that focuses on images of overpowering water (Gregorian, Azarian, DeMaria, & McDonald, 1996; Omenson, 2005). One of the greatest difficulties that impacts children who have experienced a PWT is that many times their parents are unable to provide a protective factor because they too have been traumatized (Bender & Sims, 2007). (See Table 2.1 for summary of behaviors related to specific traumas).

2.1.9 Critique of Specific Trauma Literature

When working with children who have experienced traumas, one of the greatest challenges for researchers is developing empirical data. Consequently, when researching specific traumas, theoretical research often takes the forefront based on observations made through clinical work, reviews of the literature, and anecdotal evidence. Further challenges like predicting population wide traumas in order to have ethically prepared and approved empirical research make this type of knowledge frequently based on clinical case study work and theoretical descriptions of observations (Alkhatib, et. al., 2007; Bender & Sims, 2007). Other research focuses on theoretical descriptions of therapeutic interventions, the assessment process, and descriptions

of symptoms based again on clinical experience and reviews of the literature. These works are of high importance to the field of child trauma because they synthesize the body of knowledge and provide guidance for evidence based practice. Additionally, as it is difficult to conduct empirical research on children who have experienced trauma due to ethical considerations, these works serve to provide increased wisdom in this field (Corcoran, 2000; Horton & Cruise, 1997; Kenny, 2000; Rasmussen & Cunningham, 1995; Saywitz, et. al., 2000; St. Thomas & Johnson, 2002).

Qualitative research at times becomes an alternative to theoretical research. When conducting qualitative research with children who have experienced trauma, researchers must accurately describe the steps of their research to maximize their credibility and reliability. Carmichael and Lane (1997) used a case study format to describe their work with children of addicted parents and were able to describe modifications made to the play room, as well as, the play therapy process in a manner that allowed the study the possibility of replication. Wikstrom (2005) maintained credibility through verbatim notes and encouraging participant feedback throughout the data interpretation process. Other researchers, while detailed in the description of the traumatic event and in the method of which data was collected, were not descriptive in the efforts that went into maintaining credibility and dependability so that accuracy of interpretation was maintained with the exception of inter-rater reliability in certain cases (Haen & Brannen, 2002; Gregorian, et. al., 1996; Omenson, 2005; Stronach-Bushel, 1990). Stover, et. al. (2006) went to great length to describe the research process in order to maintain credibility and dependability; however, these researchers have limitation in that their participants had to have a history of domestic violence and a need for mental health services. Consequently, the generalizability of the study, in addition to being limited due to the qualitative nature of the study, was limited by the requirement of having a documented history of both domestic violence and mental health, two issues which are frequently under-reported and under-documented. Further, the perpetrator had to be the father, which provided issues if the mother was equally

combative and the children witnessed this type of violence, and children were excluded if the mother or the Department of Children and Families reported physical or sexual abuse. Again children may not report these issues to their mothers, consequently, the study results may have been skewed if children had been abused and were included due to not reporting this type of abuse (Stover, et. al., 2006).

When empirical research is conducted on children who have been traumatized, limitations often exist within the sampling or participant criteria. Shackman, et. al. (2007) utilized an extremely small sample for empirical research (30 children total) and only described the criteria for the children in the experimental group. Further, these children had to be verified as experiencing physical abuse, again placing a limitation on the generalizability of the study as individuals with confirmed abuse cases may be distinctly different than those individuals whose cases of abuse have either been unreported or unconfirmed. Additionally, abusive parents who are willing to participate in a study with their children may be distinctly different than non-consenting parents with a history of abusive behavior. Another caveat to this study is that it measured responses to faces and vocal tones, paying particular attention to angry faces. Given that emotion and responses/receptivity to emotional expression, particularly facial emotional expression can vary by culture, the use of diverse cultures in this study can be both a limitation and a strength. Further research into how the culture of the family affects the interpretation of facial and vocal expression of emotion needs to be done (Shackman, et. al., 2007). While the focus of Lieberman, et. al.'s (2005) study was to determine the effectiveness of child-parent play therapy for children exposed to marital violence, the study provided numerous descriptions of how these children responded to the trauma. The study's sample size was reasonable (75) and was more robust in diversity due to the ability to participate coming from agency, as well as, self-referral, thus allowing for greater generalizability. The greatest limitation in this study is that both mothers and children had been exposed to multiple traumas, but the focus was on determining if the intervention was effective for domestic violence. Multiple traumas could skew

the results, as could treatment diffusion if individuals were receiving other types of intervention in the community. Further issues arose as the reliance for data was solely on parent-report measure, which presents limitations in that parents, particularly parents who may be coping with their own trauma issues may not necessarily be aware of their children's internalizing symptoms (Lieberman, et. al., 2005).

2.2 Behavioral Implications of General Trauma

2.2.1 Age Differences

While the above discussion has focused on the emotional, behavioral, and cognitive aspects of specific types of trauma, social workers need to be aware of global indicators of trauma when working with young children. Regardless of the type of trauma children have experienced, if they experience difficulty, certain global indicators are often manifested. Based on clinical experience and developmentally based trauma assessment, Steele & Raider (2001) have found differences between preschool and elementary school age children. Preschool children exhibit vague fears, decreased attention span, confusion regarding details about the trauma, changes in appetite, elimination difficulties, sleeping difficulties, generalized fears and anxiety, irritability, becoming scared of reminders of the event, regressed behavior, nightmares, repetitive play, clinginess, defiance, and aggression. In contrast, elementary school age children exhibit decreased trust in adults, increased shame, fear of being stigmatized, aggression, withdrawal, hypersensitivity and a decreased ability to forgive their own behavior, preoccupation with the traumatic event, impaired learning and concentration, worries about the safety of themselves and others, confusion, feeling frightened and confused, specific fears, mimicking parents, somatic complaints, repetitive play and activities, and sleep disturbance (Steele & Raider, 2001). Children regardless of their age tend to lose newly acquired skills, exhibit memory and concentration difficulties, experience intrusive thoughts and images, have increased alertness & hypervigilance, exhibit increased anxiety, exhibit new fears – either

specific or generalized, experience sleep disturbance, and experience some type of guilt (Steele & Raider, 2001).

2.2.2 Play & Art Themes

Children who have experienced trauma exhibit certain themes in their play and art. While art themes tend to be specific, based on the type of trauma a child has experienced, the colors used by traumatized children tend to be predominantly shades of red, black, gray, and white. (Gregorian, et. al., 1996; Kalmanowitz & Lloyd, 1999; Malchiodi, 1998).

Traumatized children typically demonstrate one of five types of trauma play. Cooper (2000) established a conceptual model of how child abuse can impact a child's play and noted that often themes of chaotic/disorganized, repetitive, aggressive, and sexualized play emerge. Children often engage in repetitive play. At times repetitive play may appear to be unrelated to the trauma and at other times very related to the trauma. Repetitive play can be an indication that the child is stuck, creating a sense of safety, or working through an issue and problem-solving (Terr, 1991; Varkas, 1998). Terr (1991) and Gil (1991) have noted repetitive play that has included sexualized and aggressive play. Case study examples with children who have experienced sexual abuse, physical abuse, and other attachment issues demonstrate repetitive play as children attempt to work through their trauma issues (Case, 2005; Jones, 2002; Roesler, Savin, & Grosz, 1993). Children may engage in agitated or disorganized play, during which time no specific play theme emerges, and the child merely spends the session moving frantically from one activity to the next with no apparent purpose or direction (Strickler, 2007). Empirical study identifies that children who have experienced sexual abuse, physical abuse, or combined sexual and physical abuse engage in disorganized play at a higher, although nonsignificant level than controls (Harper, 1991). Traumatized children often engage in sexualized play. This type of play is very common in children who have been sexually abused, but also emerges in children who have experienced other types of traumas as well. Children engaging in sexualized play may engage in sexual acts with toys, may have toys engage in

sexual acts with each other, may behave seductively toward the clinician, or may create or describe sexual art (Gil, 1991; Strickler, 2007; Terr, 1991). Case study describes sexualized play in children traumatized by sexual abuse, as does empirical research (Jones, 2002; Harper, 1991; Roesler, et. al., 1993). Traumatized children often engage in aggressive play, which may be directed toward the clinician, toward the materials in the playroom, and toward the child him/herself. Sometimes if the child feels very safe, he/she may act out aggressive fantasies toward the person or thing causing the trauma (Gil, 1991; Strickler, 2007; Terr, 1991). Empirical and case study research have also noted aggressive play in children with histories of physical abuse, sexual abuse, and combined physical and sexual abuse, as well as, other attachment issues (Case, 2005; Harper, 1991; Jones, 2002; Roesler, et. al., 1993). Finally, children will frequently engage in re-enactment play, which basically involves re-enacting the traumatic experience. During this type of play, children may continue to act out the trauma exactly as it occurred or they may try to create alternative endings for the trauma in which they are more powerful (Streeck-Fischer & Van der Kolk, 2000; Strickler, 2007).

2.2.3 Memory, Recall, & Arousal

Other areas in which traumatized children are often similar are their memory, recall, and arousal. These areas are extremely important for clinicians because often children's memory and recall of events is called into question, particularly since in young children memory and recall are affected by trauma. Arousal is an area that often causes children continued difficulty in social and interpersonal interactions as the trauma cues led to altered perceptions which maintain dysfunctional arousal, creating a vicious cycle. Traumatized children experience arousal and consequently respond to neutral cues as threatening thereby maintaining a state of hypervigilance (Eisen, Goodman, Quin, Davis, & Crayton, 2007). As such, these children, are in a stressful situation, such as a test, and may perceive a directive from a teacher as a threat leading to preparation for fight/flight or freeze.

Frequently children with a history of maltreatment or trauma have a history of dissociation and/or PTSD. This history is then linked to decreased memory functioning when compared to peers without a history of either psychopathology or without a history of trauma (Eisen, et. al., 2007). In an empirical study of abused and neglected children compared to children without a history of abuse/neglect, the youngest children demonstrated the most difficulty with memory functioning (Eisen, et. al., 2007). Physical and sexual abuse victims tended to be more accurate and respond less to suggestibility than neglected children did. However, the authors emphasized that most children did not readily accept suggestion, and even preschoolers had low rates of memory errors of both commission (active telling) or omission (missing important information) (Eisen, et. al., 2007). Although policy and practice implications will be discussed later, these findings have potential to combat allegations that young children's disclosures of abuse cannot be trusted because they are too suggestible (Eisen, et. al., 2007). This study had limitations in that it used children who had validated reports from the department of children and families, which makes generalizability difficult; it also used instruments which were normed on 8-15 year old children, yet included preschool age children, potentially making the instruments inappropriate for the sample (Eisen, et. al., 2007). Finally significant ethical concerns confounded this study because it exposed children who may not have needed a anogenital exam/venipuncture to such procedures (Eisen, et. al., 2007). These medical procedures are invasive and run the risk of further traumatizing already vulnerable children.

For traumatized children, medical and clinical evidence has found that events that have high personal significance tend to remain accurate and stable in a person's memory over time (Van der Kolk, 1998). Conversely, one of the difficulties that is experienced by young children who have been traumatized is that they have trouble making a narrative explanation of their trauma. This difficulty is related to having decreased cognitive abilities to formulate a narrative because of their young age, having autobiographical memory gaps because of relying on

dissociation, and experiencing continued helplessness, victimization, and betrayal because of the repeated interpersonal nature of the trauma that children tend to experience (Van der Kolk, 1998). Consequently, the reality that children make to survive often does not resemble the reality in which they live (Van der Kolk, 1998). Van der Kolk has extensively studied how trauma affects individuals through the age range through a combination of literature review, medical, and clinical research. Since children do not have the cognitive and verbal means frequently to organize their traumatic experience, it becomes organized in sensory components and images that are often described through play and art as images or representations on a non-verbal level (Van der Kolk, 1998; 2002). Then, when the child is under pressure or distressed, even in an event that is non-trauma related, the state-dependent, sensory traumatic-memory emerges, and a fight/flight/freeze response occurs. Consequently, the child feels vulnerable and engages in aggression, avoidance, or dissociation (Van der Kolk, 1998; 2002). This response mechanism leads traumatized children to be increasingly hyperaroused and overly responsive to irrelevant stimuli like noises, etc. making them seem hypersensitive and overreactive or delayed when compared to non-traumatized individuals (Van der Kolk, 2001; 2002). As a result of trauma, brain development is affected, and verbal development is slowed (Van der Kolk, 2001; 2002). The traumatic memory, especially when the trauma occurs repeatedly and at a young age, is often stored as “speechless terror,” and the result is that the child is literally out of touch with his/her feelings. These children then experience increased difficulty with language development (Van der Kolk, 2001; 2002). They often exhibit problems with self-soothing behaviors, have nightmares and other sleep-disturbances, and additional self-regulatory problems like aggression and self-abusive behaviors (Van der Kolk, 2001; 2002).

2.2.4 Critique of General Trauma Literature

As with the literature related to specific types of trauma, much of the literature on general trauma is conceptual in nature. Conceptual and theoretical literature is important because it makes links between behaviors seen in clinical settings and previously published

empirical research. The general trauma literature takes these observations a step further and incorporates neurobiological findings. Through conceptualizing neurobiological findings and relating them to clinical observations in conceptual and theoretical literature, further understandings of trauma's impact on childhood development occurs (Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 1998; 2001; 2002). Researchers also build upon clinical observations to form conceptual models of how trauma affects the process within the clinical therapeutic process through play; consequently enabling further research to progress to determine if these patterns have truly emerged (Cooper, 2000). Clinical and conceptual meet at times and case examples intertwine with theory to provide descriptions of literature review (Jones, 2002). Roesler, et. al. (1993) and Case (2005) provide complete case studies to illustrate the symptoms and interventions with traumatized children; however, while the description of the child is quite thorough, the methodology of selection of the case studies lacks the detail needed to provide sufficient trustworthiness other than the knowledge that the case study fit with the researcher's point to be illustrated.

When studying types of play empirically with young children, issues often arise with instruction, interpretation, and the generalizability of the sample. Tallandini (2004) studied aggressive behavior in young children through doll house play; however, her study was limited because rather than study aggression, she had operationalized negative emotion. Further, she stated "we're going to play a nice game with Dolls' House Play," and then instructed children to pick out their family, but did not possess enough dolls to represent all types of families. The instructions insinuated that the child should play nicely, and the results could be skewed if a child did not find the types of dolls that accurately represented his/her family (Tallandini, 2004). Further, for the purposes of this study, the research did not specifically include traumatized children. Studies that do not assess for trauma in children run the risk of having results be limited based on behaviors being different due to the unknown trauma status of the children. For example, are the children who are behaving in an aggressive manner, children who have

experienced an undisclosed or unknown trauma (Tallandini, 2004)? This limitation also exists in studies that look at children's sexualized play. Further limitations exist based on relying on adults' perceptions of behavior. If adults' perceive sexualized behavior to be rare, they tend to be more concerned about it, then if they perceive it to be common in preschool children (Davies, Glaser, & Kossoff, 2000). Such knowledge calls into question results that use adult-report items for child sexual activity or behavior as what can be concerning can vary by adult perception. While Harper (1991) studied the differences in play between control and abused children, the sample was small (40 subjects). The children in the sample were in day care facilities either run by welfare programs or in governmental custody. Subsequently the sample is not typical of children who come into contact with trauma as to goal of protective services is family preservation. Children removed from their homes have experienced higher levels of trauma and may be qualitatively different than those children not removed from their homes; thus making the results difficult to generalize (Harper, 1991). Further, children in welfare run day care centers or after school programs may also differ from children in other types of child care programs due to the possibility of being traumatized by experiences related to poverty. Again, the assumption that the control group has not experienced a trauma that could confound the results is a limitation. Finally, although standardized criteria for the categorization of play was used, due to the subjective nature of play, inter-rater or observer reliability would have strengthened the study (Harper, 1991). While vital to the area of child trauma, information on memory and recall also needs to be assessed for its veracity. Eisen, et. al. (2007) conducted important research in this area; however, it had limitations in the selection of participants and measures. Participants provided limited generalizability due to the majority of participants being in protective services custody and from predominantly low socioeconomic status. Further limitations with this study were the measures used to assess the children. While there was a group of children aged 3-5 and another group aged 6-10, some of the measures selected to test the children were predominantly designed to assess children beginning at age 8, making them

inappropriate to use with children at the younger end of the sample (Eisen, et. al. 2007). The use of instruments not normed for this populations limits the usefulness of the results that pertain to interpretation of these instruments.

2.3 Behaviors Related to Diagnosis

Knowing that traumatized children behave in certain ways, both globally and related to the specific type of trauma they have experienced, behavior becomes important to explore how they relate diagnostic criteria and if these criteria are appropriate for children. Regardless of whether children experience a single event or PWT or experience interpersonal/chronic or developmental trauma (to be described as follows), they tend to display four dominant symptoms (Ogawa, 2004; Terr, 1991). They tend to re-experience the trauma through repetitive and intrusive thoughts that manifest through art, writing, and play (Ogawa, 2004; Terr, 1991). Children engage in repetitive behavior related to the traumatic experience and possess trauma-specific fears (Ogawa, 2004; Terr, 1991). Finally, children have a tendency to have a limited future-orientation that presents as feelings of powerlessness, hopelessness, and a loss of control (Ogawa, 2004; Terr, 1991).

2.3.1 Developmental Trauma Disorder

Along a similar vein, Van der Kolk (2005) suggested the concept of developmental trauma disorder based again on a combination of clinical and medical observations combined with developmental theory that embraces the idea that children most frequently experience interpersonal trauma and do not respond in the same manner that adults do. The behaviors observed that led to the proposal of this diagnostic class included affective lability, impulsivity, self-destructive or abusive behaviors, aggression toward others, difficulty trusting others, suspicion of others, difficulty with the concept of a stable self-identity all of which result in social isolation (Van der Kolk, 2005). Children also exhibited alterations in consciousness including amnesia, dissociation, flashbacks, nightmares, derealization, depersonalization, attention and concentration difficulties, spatial difficulties, disorientation to time, academic problems, and

sensorimotor delays (Van der Kolk, 2005). Consequently, children engage in disturbed attachment, problematic emotion expression, self-blame, negative attributions toward the world, appetite and sleep disturbance, somatic complaints, aggressive, destructive, and regressed behavior, and chronic feelings of ineffectiveness. They tend to re-enact their traumatic experiences either as perpetrators of aggression or sexual acting out or in avoidance reactions (Van der Kolk, 2005). Based on this culmination of observations, developmental trauma disorder, requires that children experience multiple or chronic exposure to one or more forms of developmentally adverse interpersonal trauma and experience of rage, betrayal, fear, resignation, defeat, shame, etc. (Van der Kolk, 2005). By experiencing chronic adverse interpersonal events/relationships, children experience patterns of repeated dysregulation in response to trauma cues in affective, somatic, behavioral, cognitive, relational, and self-attribution areas. They experience persistently altered attributions and expectations and functional impairments as a result of the trauma and subsequent dysregulation (Van der Kolk, 2005). Traumatized children's dysfunction in the affective arena often results in a failure to recognize and appropriately label what they are feeling, which leads to an inability to understand the physical sensations that occur when aroused by emotional states. Consequently, they often either withdraw or freeze when threatened or lash out at small annoyances (Van der Kolk, 2006). Through viewing trauma from this developmental perspective, behaviors of dysregulation such as aggression and oppositional-defiance, become better understood as protective functions that children engage in when distressed and experiencing state-dependent memory retrieval (Van der Kolk, 2005; 2006).

2.3.2 Complex Trauma

Following the work of Terr (1991) and Van der Kolk (2005), further theory has evolved into the area of complex trauma. Complex trauma is based upon a combination of clinical observation and developmental theory and builds upon the idea that children have been multiply exposed to interpersonal trauma and are adversely affected in several domains (Van der Kolk,

2005). It describes how the dysfunction becomes incorporated and entrenched into their lives and results in multiple dysfunction causing future interactions to become problematic. Children who have experienced complex trauma, in addition to displaying symptoms related to developmental trauma disorder, view anything new as potentially threatening (Streeck-Fischer & Van der Kolk, 2000). They tend to project their feelings onto others and incorporate other's attitudes and behaviors, even when they are irrelevant. Generally, these children have a very limited and fluid sense of self (Streeck-Fischer & Van der Kolk, 2000). They frequently do not know how to obtain help from others and see others as sources of gratification or terror (Streeck-Fischer & Van der Kolk, 2000). They engage in repetitive re-enactments of their trauma on an interpersonal level through actions and play by being either withdrawn or bullies (Streeck-Fischer & Van der Kolk, 2000). Often children who have difficulties with complex trauma have severe learning problems and multiple physical illnesses. Increasingly, exposure to multiple trauma interacts in a manner that decreases children's cognitive and intellectual development, which in turn makes them more vulnerable to further trauma, which in turn causes adverse effects on intellectual and cognitive development (Streeck-Fischer & Van der Kolk; Strickler, 2001).

Children exposed to chronic trauma often experience helplessness and continue to behave as if they are traumatized. They are often seen as oppositional or unmotivated because of a fight/flight/freeze mechanism (Streeck-Fischer & Van der Kolk, 2000). They often become overly compliant or accommodating without being emotionally involved and eventually become disorganized and self-destructive. Conversely, they may experience hyperarousal and have uncontrollable rages, anger, or sadness (Streeck-Fischer & Van der Kolk, 2000). They have frequent somatic complaints, can be hypersensitive to physical contact, have difficulty with coordination, engage in regressed behavior, not speak coherently, make odd noises, have poor body tone, experience pseudoseizures, tics, and facial grimaces, and either have exaggerated or inhibited startle responses (Streeck-Fischer & Van der Kolk, 2000). Often these children

dissociate, which interferes with their ability to engage in activities with others. These children often display inappropriate affect, constricted behavior, or “frozen happiness” (Van der Kolk, 2005). They often have rigid or constricted play and cannot engage in symbolism or fantasy play (Van der Kolk, 2005). Patterns related to disorganized attachment, increased susceptibility to stress, attention difficulties, impaired help-seeking behaviors, social isolation, and affective instability have been noted repeatedly in chronically traumatized children (Van der Kolk, 2005).

Maturational factors account for some of the differences in complex trauma. Toddlers and preschool-aged children are at great risk for decreased brain development that affects the areas responsible for regulating emotional responses to stress, language, abstract reasoning, and long-range planning development. As a result these children tend to become disorganized and exhibit confusion, helplessness, withdrawal, or rage when confronted with stress (Cook, Spinazzola, Ford, Lanktree, Blaustein, et. al., 2005). School aged children’s brain development is affected in the areas needed for executive functioning, autonomous functioning, and engagement in relationships. Consequently these children have difficulty developing self-awareness, becoming genuinely involved in other people, assessing and understanding emotional experiences, learning from past experiences, and understanding others’ perspectives, (Cook, et. al., 2005).

2.3.3 Complex PTSD (Disorders of Extreme Stress Not Otherwise Specified)

Criteria for a Disorders of Extreme Stress Not Otherwise Specified or Complex PTSD has been explored. The reasoning behind this exploration involved the complex trauma literature noting that PTSD does not entirely encompass all of the symptoms portrayed by individuals who have experienced chronic, interpersonal trauma (Pelcovitz, Van der Kolk, Roth, Mandel, Kaplan, & Resick, 1997; Van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005; Van der Kolk & Fisler, 1994). The criteria set forth for this disorder were validated initially by a panel of experts and empirically tested. Complex trauma results in dysfunction in several domains (Pelcovitz, et. al., 1997; Van der Kolk, et. al., 2005; Van der Kolk & Fisler, 1994).

These domains include alteration in regulation of affect and impulses, regulation of attention or consciousness, self-perception, relations with others, systems of meaning, and automatization. A suggestion for changes in perception of the perpetration was made but since not supported empirically, it was consequently not required for diagnostic criteria (Pelcovitz, et. al., 1997; Van der Kolk, et. al., 2005; Van der Kolk & Fisler, 1994). In the initial study by Pelcovitz, et. al. (1997), a treatment seeking sample was divided into interpersonal trauma versus disaster type trauma. Although some respondents were recruited from child/adolescent psychiatry, preschool age children were not included. In the Van der Kolk et. al. (2005) study, only adolescent and adult individuals were selected. Consequently, although extrapolation for early childhood trauma is made based on clinical observations, as well as, retrospective analysis from individuals in the above studies who reported early onset of interpersonal trauma (prior to age 13), without including theoretical dimensions discussed in the developmental trauma section, it is difficult and complicated to assess the symptomatic criteria for children.

Nevertheless, modifications have been made for children since they demonstrate behavioral, emotional, developmental, and cognitive difficulties; however, problems occur when trying to demonstrate exactly how young children may fit into each area of dysfunction using the criteria specified based on testing done with children of standardized testing age (generally at least a third grade reading level or 8 years of age). Consequently, based on clinical observation and theoretical analysis, modified criteria for domains of impairment for children, exposed to complex trauma, has emerged with impairment hypothesized to occur in seven domains that more closely match the development of young children (Cook, et. al., 2005). These domains include attachment, biology, affect regulation, dissociation, behavioral control, cognition, and self-concept (Cook, et. al., 2005). See Table 2.2 for a comparison of developmental trauma disorder and complex trauma.

Table 2.2 Comparison of Complex Trauma & Developmental Trauma Disorder

	AFFECTIVE DYSFUNCTION		SOMATIC DYSFUNCTION		BEHAVIOR DYSFUNCTION													
	Affective Instability	Understand & Label Feelings	Rage	Somatic Complaints	Sensorimotor Dysfunction	Multiple Med. Problems	Poor Body Tone	Re-enactment	Regression	Self-Destructive Behavior	Impulsivity	Aggressive Behavior	Sleep Disturbance	Oppositional Behavior	Overly Compliant Behavior			
Developmental Trauma Disorder Van Der Kolk (2005)	x	x		x	x			x	x	x	x	x						
Complex Trauma Cook, et. al. (2005)	x	x	x		x	x	x	x		x	x	x	x	x	x			
Streeck-Fisher & Van der Kolk (2000)			x			x		x	x	x				x	x			
Van Der Kolk (2005)				x		x												

	DISSOCIATIVE DYSFUNCTION		COGNITIVE DYSFUNCTION		INTERPERSONAL DYSFUNCTION		SELF-CONCEPT DYSFUNCTION											
	Altered States of Consciousness	Derealization	Depersonalization	Amnesia	Dissoication	Attention Difficulties	Learning Problems	Time & Space Orientation	Trust Issues	Suspiciousness	Problematic Attachment	Social Isolation	Impaired Help Seeking	Unstable Sense of Self	Feelings of Ineffectiveness	Guilt/Shame/Blame		
Developmental Trauma Disorder Van Der Kolk (2005)	x	x	x	x	x		x		x	x	x	x					x	x
Complex Trauma Cook, et. al. (2005)	x	x	x	x		x	x	x	x	x	x	x	x				x	x
Streeck-Fisher & Van der Kolk (2000)						x							x					
Van der Kolk (2005)					x							x						

2.3.4 Critique of the Diagnostic Trauma Literature

Just as prior literature discussed has combined conceptual and empirical research, so does the diagnostic trauma literature. This particular area, however, began with a clinical gap in the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Text Revision (DSM-IV-TR)*, and resulted in empirical research lending merit to the beginnings of conceptual work for new diagnostic criteria. Van der Kolk and Finkelhor (1994) reviewed the literature and provided conceptualization about the relationship between child abuse and neglect and the inability of children with these experiences to self regulate. Additional gaps in the PTSD diagnostic literature were noted. Pelcovitz, et. al. (1997) reviewed the literature based on individuals who had experienced childhood sexual abuse, physical abuse, crime, rape, incarceration in concentration camps, torture, and domestic violence and then worked to determine the validity of items to include on a scale to assess PTSD symptoms not included in the *DSM-IV-TR*. The testing of the measure utilized means to ensure inter-rater reliability, internal consistency, and dropped an item that was not deemed to correspond enough with the scale. The categorizations of the participants with interpersonal trauma to those participants who had experienced disaster provided a means to ensure that the measure was indeed accurate for interpersonal trauma (Pelcovitz, et. al., 1997). The limitations of the study involve the possibility of social desirability bias due to the structured interview form of the measure and the dichotomous format of response rather than allowing for a more varied Likert type response system (Pelcovitz, et. al., 1997). Further empirical research was performed on the need to have alternative criteria for PTSD, which became known as the Disorders of Extreme Stress Not Otherwise Specified (DESNOS) constellation (Van der Kolk, et. al., 2005). Again, the field trial utilized a large sample; however, even the community sample had experienced a high degree of trauma, making generalizability questionable. The treatment-seeking sample was selected from patients at sites specializing in psychological trauma. Generalizability becomes an issue when such sites are rare throughout the country, and the assessors at such sites often have

specialized experience that researchers at sites not specializing in trauma would not have (Van der Kolk, et. al., 2005). Based on such field testing for future diagnostic categorization, the conceptual work for complex trauma in children and developmental trauma disorder then followed (Cook, et. al., 2005; Van der Kolk, 2005).

2.3.5 *DSM-IV-TR*

Since the diagnoses for Type I and Type II trauma, developmental trauma disorder, complex trauma, and complex PTSD do not exist in the current version of the *DSM-IV-TR*, clinicians are left with the disorders that are available. While the previously discussed proposed disorders or symptom constellations seem to better fit traumatized children, they may also and frequently do present with several behavioral and emotional disorders. These disorders are related to their traumatic experiences but do not fall within the realm of a trauma disorder. Some typical disorders and their relation to childhood trauma will briefly be discussed. Childhood disorders in the *DSM-IV-TR*, include elimination disorders such as enuresis and encopresis, feeding and eating disorders of infancy and early childhood such as pica, rumination, and the disorder whose name mimics the name of the category, separation anxiety disorder, selective mutism, stereotypic movement disorder, reactive attachment disorder, oppositional defiant disorder, and conduct disorder – early childhood onset. These disorders are often associated with trauma (American Psychiatric Association (APA), 2000; Strickler, 2007). These behavioral/emotional constellations frequently present in children when they have experienced abuse/neglect, hospitalization or loss, repeated disrupted attachments from primary caregivers, or another significant traumatic life event (APA, 2000). The constellation of symptoms at times is part of the flight/fight/freeze mechanism, at other times is a means for self-protection, and at other times is a method of self-soothing or an attempt at corrective although maladaptive reattachment (Strickler, 2007).

2.3.5.1 Feeding Disorders

While these descriptions have been noted in the *DSM-IV-TR*, empirical and case study literature related to trauma and young children with these disorders is often lacking due to the nature of the research, which is compounded with ethical concern for these vulnerable children. However, single subject design has been used demonstrate the effectiveness of fluoxetine in treating trauma related to food experiences such as choking, medical experiences, vomiting, and forced feeding in extremely young children who have been diagnosed with feeding and eating disorder of infancy and early childhood (Celik, Somer, Tahiroglu, & Avci, 2007). Case study report has further noted the presence of feeding disorders in young children who have been traumatized by the political disappearance and/or persecution of their parents (Carli, 1987).

2.3.5.2 Elimination Disorders

In a manner similar to feeding disorders, elimination disorders have been linked to trauma. Enuresis and encopresis has also been reported in case studies in which children have experienced the political disappearance of their parents (Carli, 1987). Enuresis is often linked with sexual abuse and is often a warning sign that abuse may have occurred (Felman & Nikitas, 1983). Further investigation has looked into the association between enuresis and automobile accidents. Tali, Mark, & Yaakov (1998) studied children admitted to a day hospital following an automobile accident. All of the children presented with mild trauma and secondary nocturnal enuresis leading the researchers to believe that nocturnal enuresis was part of the trauma symptom profile for children involved in traffic accidents. Other research describes the use of single system design to treat enuresis with hypnosis, but again, the trigger of the enuretic problem was psychological trauma caused by an automobile accident (Iglesias & Iglesias, 2008). Inan, Tokuc, Aydiner, Aksu, Oner, & Basaran (2007) compared 2000 enuretic and nonenuretic children to determine on what personality characteristics they differed significantly. Enuretic children were found to experience significantly more psychological or physical trauma,

have a lower education level of their mothers, have working mothers, have siblings with health problems, have a larger family size, be the only child in the family, lack a private bedroom, have siblings and/or parents with a history of nocturnal enuresis, and have divorced parents or a separated family (Inan, et. al., 2007). These characteristics include several that are related to traumatic experiences for children in addition to the overt experience of trauma, particularly having siblings with health problems, and having divorced parents or a separated family. Finally, because of the social stigma and difficulties associated with enuresis, whether diurnal or nocturnal, the experience of this disorder often puts children at risk for experiencing the trauma of child abuse (Brown University, 2002). Children also receive the same risk for experiencing encopresis. 162 children observed after a flood in Bangladesh experienced significantly more episodes of encopresis than they had prior to the natural disaster, indicating a relationship between the experience of trauma and this disorder (Durkin, Khan, Davidson, Zaman, & Stein, 1993). Case study reports frequently link encopresis to the trauma of sexual abuse, experiencing the trauma of the political imprisonment of parents, marital problems, divorce, and chaotic family environments (Carli, 1987; Gauthier, Drapeau, Leclaire, Fortin, & Forget, 1970; Roesler, et. al., 1993).

2.3.5.3 Selective Mutism

Just as feeding and elimination disorders may be associated with trauma, selective mutism is at times associated with trauma. Case study reports find speech problems associated with children who have experienced trauma related to the political imprisonment or disappearance of their parents, with physical and sexual abuse, with witnessing murder, and severe neglect and traumatic removal from parents into the foster care system (Carli, 1987; Case, 2005; Jacobsen, 1995). In an empirical study, 135 children began a screening and 30 were able to complete a full-evaluation. Thirteen percent of the subjects were found to have a history of physical or sexual abuse, another abuse and neglect, 23% had parents who were separated and 13% had parents who had been divorced and another 23% had experienced an

overnight hospitalization (Black & Uhde, 1995). Although only a minority of subjects experienced each type of subjects, it was evident through the study that there is a link between traumatic experiences and selective mutism for at least certain children; however, further investigation is needed to explore the exact nature of the relationship.

2.3.5.4 Eating Disorders

Traumatized children may also present with eating disorders such as anorexia nervosa, bulimia nervosa, or eating disorder not otherwise specified (Costin, 2006; Felman & Nikitas, 1983; Sklarew & Blum, 2006; Strickler, 2007). The increase in these disorders in young children, specifically young girls ages 6 or 7 to 12, at some of the nationally recognized eating disorders treatment centers is theorized to be related to the increased objectification of females at younger and younger ages, both by society and in the media, the higher rates of physical and sexual abuse of young children, society's emphasis on thinness, cultural norms that embrace the thin ideal and pseudo-mature behavior by young stars, and earlier pubertal development (Costin, 2006; Strickler, 2007). Traumatic incidents have been investigated and linked to the development of specific eating disorders. Preterm or birth trauma has been linked to the development of anorexia nervosa (Jacobi, Morris, & de Zwann, 2004). Further evidence of attachment trauma related to prenatal or perinatal complications or following a child who was miscarried was noted in 25 % of subjects who developed anorexia nervosa as compared to only 7.5% of control subjects (Shoebridge & Gowers, 2000). Sexual abuse that occurs in childhood and/or adolescence has been associated with the development of anorexia nervosa and/or bulimia nervosa. Sexual abuse and adverse life events occurring in childhood and/or adolescence has been linked to the development of anorexia nervosa (Jacobi, et. al., 2004). A sense of sexual shame or disgust is also more prevalent in younger patients who present with eating disorders, particularly anorexia nervosa, indicating that children may experience trauma through a concerning type of relationship with friends or family that is not necessarily abusive

but evokes uncomfortable or shameful feelings (Schmidt, Tiller, Blanchard, Andrews, & Treasure, 1997).

2.3.5.5 Adjustment Disorders

Children experience difficulty with adjustment after disclosing or experiencing a trauma and may present with mood, conduct, or varied symptoms that do not fit into a specific problem area but still warrant a diagnosis of adjustment disorder. Conversely, some children as they begin to progress through treatment, improve and no longer require their former clinical diagnoses, but now may possess an adjustment disorder as they adjust to life without PTSD, major depression, anorexia nervosa, etc. (Strickler, 2007).

2.3.5.6 Mood Disorders

Finally, major depressive disorder, bipolar disorder, are frequently seen in children who have experienced a trauma because the symptoms required for diagnosis are typically frequent or extreme versions of the behaviors and experiences that traumatized children typically have (Strickler, 2007; Van der Kolk, 2005). Irritability, crankiness, becoming easily frustrated, having numerous somatic complaints, becoming withdrawn, refusing to engage in typical, including fun activities, and experiencing sleep and appetite disturbances link trauma and depression (APA, 2000; Strickler, 2007). Aggression, school refusal, truancy, school failure and other behavior problems link trauma and bipolar disorder symptoms (APA, 2000). A preoccupation with death can link trauma to any major mood disorder (APA, 2000; Strickler, 2007). Case study reports further link trauma to bipolar and depressive disorders (Carli, 1987; Sklarew & Blum, 2006). Children who are sexually abused are 3.4 times more likely to experience major depressive disorder (Becker-Weidman, 2006). According to Scheeringa, Zeanah, Myers, & Putnam (2003), young children who experienced trauma and met criteria for PTSD had significantly higher rates of major depressive disorder and scored significantly higher on the total Child Behavior Checklist (CBCL) and the CBCL Internalizing scale than children who experienced trauma and did not meet criteria for PTSD and than healthy controls. Scheeringa and Zeanah (2008) found

that 42.8% of preschoolers who experienced PTSD as a result of a natural disaster also met criteria for major depressive disorder.

2.3.5.7 Behavioral Disorders

Children who have experienced trauma often experience significant behavioral difficulties either in combination with or in the absence of mood symptoms. Often these behaviors are an attempt to provide a fight response when children feel as though they are in danger. Behavioral difficulties present in traumatized children most often as oppositional defiant disorder (ODD), attention deficit hyperactivity disorder (ADHD), or conduct disorder (CD). Trauma interacts in a unique way with behavioral disorders. The experience of trauma often exacerbates the angry oppositional behavior found in children with ODD, which in turn makes them more likely to experience further trauma (Ford, Racusin, Daviss, Ellis, Thomas, Rogers, et. al., 1999). Further, hyperarousal and intrusive images and other types of re-experiencing can contribute to aggressive and oppositional symptoms; whereas, avoidance, detachment, and numbing can be associated with defiance or spitefulness in ODD (Ford, et. al., 1999). In a similar fashion, trauma often increases the impulsive, hyperactive, and disruptive behavior found in ADHD, as well as, the attentional difficulty, which again makes children more likely to experience further trauma. The re-experiencing and hyperarousal symptoms often contribute to further disruptions in attention and activity regulation; while, avoidant symptoms lead to motivational and social problems in children with ADHD (Ford, et. al., 1999). Such issues contribute to the question of how much interaction to these disorders display with trauma. Approximately 29.4% of children were found to have ADHD and 56.5% of children were found to have ODD following experiencing Hurricane Katrina (Scheeringa & Zeanah, 2008). Children who experience trauma and meet criteria for PTSD were significantly more likely to exhibit ADHD and ODD symptoms, as well as, score higher on the CBCL Externalizing scale (Scheeringa, et. al., 2003). Ford, et. al. (1999) found that ADHD and ODD, but especially comorbid disorders, were significantly correlated with family psychopathology. Additionally,

these two disorders displayed a significant association with being the victim of a traumatic experience (Ford, et. al., 1999). Bhatia, Dhar, Singhal, Migam, Malik, & Mullick (1990) found that oppositional children were significantly more likely to have experienced neglect than control children. While not significant, these children also displayed higher percentages of experiencing discord among their parents (Bhatia, et. al., 1990).

2.3.5.8 Attachment Disorders

Just as children with behavioral disorders have been found to have higher percentages of traumatic experiences, children with reactive attachment disorder, by definition of the disorder, have experienced some type of trauma that has consequently been disruptive to their attachment process. These children tend to have histories of maltreatment in the form of physical, emotional, and sexual abuse and/or neglect. They then tend to have difficulty with attachment, which contributes to problems like dissociative, depressive, anxious, and acting out symptoms, which can culminate in reactive attachment disorder (Becker-Weidman, 2006). This disorder further interacts with other behaviors that are commonly seen in traumatized children, which can then be either misdiagnosed or accurately diagnosed as a comorbid disorder. Frequently these behaviors involve binge eating, as seen in eating disorders, lying or stealing, as in ODD, cruelty to animals, people, or fire setting, as seen in conduct disorder, impulsivity and hyperactivity, as seen in ADHD, and inappropriate sexual behavior or promiscuity, as often seen in children who have PTSD as a result of being sexually abused (Hall & Geher, 2003). In an empirical study, children with reactive attachment disorder score significantly higher than children without reactive attachment disorder on specific problems scales including general behavior problems, social problems, withdrawal, somatization, thought problems, anxiety and depression, attention difficulty, delinquent behaviors, and aggression (Hall & Geher, 2003). Case study reports further describe the link between reactive attachment disorder and trauma (Corbin, 2007). This disorder further displays the process of the fight/flight/freeze mechanism within individual children as they struggle with dysfunctional attachment.

2.3.5.9 Anxiety Disorders

Children who have experienced trauma engage in many activities in order to regain a sense of safety. Some of these activities culminate in the symptoms described above; however, children often have magical thought processes related to obsessions or compulsions that help them create a sensation of safety in light of a traumatic experience and often become aggressive or hostile when their comforting behavior is thwarted just as other traumatized children respond when state-dependent memories trigger a fight response (APA, 2000; Strickler, 2007). Generalized anxiety requires one generalized worry and most traumatized children present with generalized or specific fears depending upon their age (Strickler, 2007). While children may experience the aforementioned anxiety disorders, the most commonly experienced anxiety disorder in traumatized children is separation anxiety disorder. Separation anxiety disorder is frequently caused by significant changes like moves or loss, and the symptoms are exacerbated by complicated grief (Harvard Medical School, 2007). Separation anxiety disorder was found in 50% of the children studied who experienced Hurricane Katrina (Scheeringa & Zeanah, 2008). Separation anxiety disorder is found in significantly higher percentages in children who have experienced a trauma and meet a diagnosis for PTSD than in those children who either do not meet criteria for PTSD or normal controls (Scheeringa, et al., 2003). If not treated successfully, separation anxiety disorder in children, often either becomes comorbid with or leads to panic disorder or social phobia in adolescence (Bittner, Egger, Erkanli, Costello, Foley, & Angold, 2007). Clinical reports of separation anxiety disorder have also found significant links between this disorder and specific phobia, generalized anxiety disorder and PTSD (Kearney, Sims, Pursell, & Tillotson, 2003).

While separation anxiety disorder is common in children who have experienced trauma, no discussion of disorders is complete without mentioning the actual disorders that require a traumatic incident to occur. Although acute stress disorder, the time-limited, often precursor to PTSD, and PTSD also fall within the scope of anxiety disorders, due to the different

symptomatology that children display and the above discussion of developmental trauma disorder, these diagnoses will not be addressed, as young children tend to not fully fit criteria for them based on developmental symptoms, such as difficulty with verbalization of experiences and abstract thought that necessitates a different set of criteria for young children (Scheeringa, et. al., 2003; Strickler, 2007; Van der Kolk, 2005; 2006).

2.3.6 Critique of Literature Related to DSM-IV-TR Diagnoses

2.3.6.1 Elimination Disorders

As with the bulk of literature concerning children and trauma, literature related to comorbid diagnoses presents with some concerns. Literature related to elimination disorders presents with issues related to being descriptive and informative in nature (Brown University, 2002; Felman & Nikitas, 1983). Other studies are descriptive in nature, but limited by the selected categories of description by the researchers. Grouping psychological and physical trauma together may not adequately describe or link enuresis with trauma as certain types of physical trauma could produce a physical cause of enuresis; while psychological trauma may be linked to enuresis being a comorbid symptom (Inan, et. al., 2008). One shot case study can be used to empirically link enuresis to trauma; however, because of the age of participants, it is often limited by the difficulty of ascertaining a direct link to the trauma versus other life events that can be attributed to enuresis in preschool and early school age years (Durkin, et. al., 1993). Durkin, et. al. (1993) strengthened their research by using large sample with a wide age ranger to account for this disparity in relation to elimination disorders. The final issue that occurs frequently with elimination disorders and trauma that often limits research is caregiver response to the enuresis or encopresis. While trauma may be linked to the origin of the disorder, the caregiver response can often be equally traumatic, thus confounding research results as to the origination of the trauma or the elimination disorder (Brown University, 2002).

2.3.6.2 Selective Mutism

Unlike elimination disorders, which often present with a combination of empirical, theoretical, and qualitative research, selective mutism is frequently presented in case study form. Case studies greatly detail the clients' symptoms and treatment progression, but are limited by the necessity of the selection of the case study to illustrate the researcher's aim (Case, 2005; Jacobsen, 1995). Black and Uhde (1995) conducted an empirical study on selective mutism; however, the study had limitations in the selection process through depending on referrals through elementary school counselors when participant age ranged from 5-16. Generalizability also is questionable as many children do not come into contact with school counselors other than for educational testing purposes even when issues with psychological problems arise. Children who met criteria for selective mutism were engaged in a child interview where nonverbal responses could be recorded; however, diagnostic interviews with the children were impossible due to their mutism. Consequently all diagnostic information came from third parties, which could adversely affect the results of the research, particularly in the area of child traumatic experiences, as parents may be unaware of children's experiences or unwilling to disclose them if they are the perpetrators (Black & Uhde, 1995).

2.3.6.3 Eating Disorders

Eating disorders have had a long history of a link to childhood sexual abuse and to some extent physical abuse (Costin, 2006; Strickler, 2007). The prevalence of eating disorders in young children has yet to be empirically studied as it is just beginning to rise in the clinical environment (Costin, 2006). However, case study report has documented food refusal and associated fear in children as young as two after the trauma of choking and invasive medical procedures (Celik, et. al., 2007). Jacobi (2005) provided a review of relevant eating disorder literature to cite specific markers such as early onset puberty as a risk factor for the development of an eating disorder. Shoebridge and Gowers (2000) looked at parental trauma of the loss of the child or parental obstetric complications and the link with eating disorders;

however, further research is needed to determine how these experiences in parents affect the attachment and experience in the child to determine if the child perceives vicarious trauma or experiences full-blown traumatic interactions in their own right. Schmidt, et. al. (1997) linked eating disorders and adverse life experience; however, the limitations with this study were looking at only older adolescents and adults, which excludes one of the age groups that predominantly develops eating disorders – adolescents at puberty. Schmidt, et. al. (1997) also focused predominantly on sexual concerns, pudicity, thereby, avoiding the possibility that other traumatic events are linked to the development of eating disorders. Further, one of the definitions of pudicity, included “being confronted with her parents’ sexuality in an inappropriate manner” (Schmidt, et. al., 1997, p.525). This definition provides a possibility for the trauma of covert sexual abuse, but labels it in a less traumatic manner. Such issues minimize the generalizability of the study to the diverse types of people who develop eating disorders, as well as, its applicability to the field of comorbidity between trauma and eating disorders.

2.3.6.4 Mood Disorders

Case study experience ties eating disorders and depressive disorders (Sklarew & Blum, 2006). However, the case study experience needs to be viewed with caution as childhood trauma is often illustrated in adult cases. Despite these difficulties, empirical data links major depressive disorder in young children to traumatic experiences. Scheeringa, et. al. (2003) found that traumatized children have significantly more diagnoses of major depressive disorder than healthy controls. This study possessed strength in that the traumatized participants were recruited in a manner that provided for diversity in the types of trauma they experienced to include domestic violence and medical trauma. It relied on clinical referrals, as well as, word of mouth, allowing for greater generalizability since not all traumatized children came from treatment programs. It also possessed strength in utilizing a relatively high number of evenly distributed healthy controls and traumatized children (63 and 62 respectively). A limitation of the study was that the healthy controls were neighbor children of the traumatized children;

consequently, they may have experienced some vicarious trauma through their associations with the traumatized children (Scheeringa, et. al., 2003). Scheeringa and Zeenah (2008) also found major depressive disorder in children who experienced Hurricane Katrina, but did not find the hypothesized significant differences between those children who stayed and those children who were evacuated. Limitations with this study included selection via newspaper. Following a traumatic experience, it is unlikely that those children and caregivers severely impacted by the traumatic experience would be looking in the newspaper to participate in the study or may not have returned to the area yet, thus limiting the research to higher functioning children; conversely, those individuals experiencing difficulty with their children may have been more likely to self-select; thus limiting the research to children with greater difficulty (Scheeringa & Zeenah, 2008). Another limitation with this research is the dependence on parent selection. If the child was experiencing internalizing symptoms, the parent may not have been aware; therefore, the depressive symptoms may be underreported due to an overrepresentation of children with acting out symptoms based on the form of solicitation. Finally, parents may experience their own trauma symptoms, feelings of guilt, or feelings of overprotection, which can lead to the over or underrepresentation of children's symptoms because of the relationship of the parent to the traumatic experience, thus making it difficult to ascertain the true extent of the child's symptoms and interfering with the research results (Scheeringa & Zeenah, 2008).

2.3.6.5 Behavioral Disorders

Acting out disorders have been documented through the same empirical methods as major depressive disorder. Consequently when Scheeringa, et. al. (2003) and Scheeringa and Zeenah (2008) documented the comorbidity of ADHD, ODD, and externalizing behaviors on the Child Behavior Checklist (CBCL) the same strengths and limitations to the research exist that were discussed above. Ford, et. al. (1999) studied comorbidity between ADHD, ODD, adjustment disorders and trauma. The strength of this study was that the researchers marked the results positive for trauma if either the child or the parent endorsed a trauma item; thereby,

allowing for the possibility that definitions may vary or disclosures may not have been made (Ford, et. al., 1999). The study also had a relatively large sample of 165 children from diverse ethnic other demographic backgrounds thus increasing its generalizability. Limitations of the study included using only a clinical sample; thereby, further research would be warranted to determine if those individuals not involved in treatment have different symptomatology. Other limitations or areas for future research include differentiating among the types of trauma to determine if specific types possess greater comorbidity with each disorder (Ford, et. al., 1999). Bhati, et. al. (1990) also looked at ODD in children to determine the psychosocial components of the disorder. Neglect was a significant finding. A control group of children was matched; however, a limitation of the study was not describing the sampling method of the control group. All of the experimental children were involved in outpatient treatment, which presents difficulty with generalizability. Further, one parent was interviewed and since the psychosocial components included issues related to parental discord, parental mental illness, abuse, neglect, parental substance use, etc., it presents question as to whether or not the parents involved were affected by social desirability bias, which could distort the results (Bhati, et. al. 1990).

2.3.6.6. Attachment Disorders

Reactive attachment disorder by definition has a link to traumatic experiences. Consequently, it is described conceptually, through case study, and through empirical testing of intervention approaches in the literature (Becker-Weidman, 2006; Corbin, 2007). Empirical literature has worked toward the development of a Reactive Attachment Disorder Scale (RADS) in order to better differentiate children with this disorder (Hall & Geher, 2003). The goal of the research was to determine if the scale could adequately differentiate symptoms between children with RAD and children without RAD. Consequently a limitation of the research was relying on caregiver report for children who as a diagnostic requirement form poor attachments. Thus, caregivers may not be aware of or may misinterpret behaviors altering the results of the research (Hall & Geher, 2003). Another limitation is the reliance on a psychologist's diagnosis

to categorize the children into the RAD category. Clinical evidence has demonstrated that children of parents with factitious disorder not otherwise specified, more commonly known as Munchausen Syndrome by Proxy, can be abused by their parents and misdiagnosed with RAD until they spend considerable time with professionals (Perry & Szalavitz, 2007). Finally, recruitment was through support groups for people caring for children with RAD. Individuals involved with support groups are likely to be qualitatively different than those individuals who do not seek out such support; thus a more diverse group of caregivers may provide different results for the research, which calls into question the generalizability of the results (Hall & Geher, 2003).

2.3.6.7 Anxiety Disorders

Finally, the literature on separation anxiety disorder reviewed is largely empirical. The Harvard Medical School (2007) provides descriptive literature; however, Scheeringa, et. al. (2003) and Scheeringa and Zeehan (2008) provide an empirical link between trauma and separation anxiety disorder in young children. The critique of this empirical literature was discussed in the section reviewing the literature on major depressive disorder. Further empirical research on separation anxiety disorder has been collected through longitudinal study on psychiatric disorders in the Great Smoky Mountains. One of the limitations of this research in relation to the present study is that it focused on later childhood and early adolescence (Bittner, et. al., 2007). Another limitation of this study is the use of the externalization scale of the CBCL to assess anxiety disorders. This measure was used for initial screening questions; however, many anxiety symptoms present as internalizing symptoms. Since the children in this study were older, the measure does possess both a parent and child report version providing some strength where previous studies discussed were limited by parent-only report. Another limitation is that the analyses were averaged across transitions, which makes it difficult to differentiate if particular symptoms are present due to specific developmental considerations at that point in time (Bittner, et. al., 2007). A strength and limitation of the study is its use of a

community sample. The inclusion of and comparison to a clinical sample in the future would strengthen the findings, as would comparison with younger children (Bittner, et. al., 2007). Finally, while utilizing a large sample and a large geographic location, the area of the country may not necessarily be representative to children with more urban experiences (Bittner, et. al., 2007). Kearney, et. al. (2003) studied preschool children to determine differences in children with clinical, subclinical, and no separation anxiety disorder. Limitations with this study again involve the geographic location of the participants as southern Nevada is a unique environment for generalizability. The description of the measures used presents issues as no information is provided based on the normative age groups for these measures, including the version of the CBCL used (Kearney, et. al., 2003). Finally, it is difficult to determine if the clinical changes or stability are genuine or related to developmental issues (Kearney, et. al., 2003).

2.4 Theoretical Underpinnings of Early Childhood Trauma

Several theoretical underpinnings are available from which to create a measure to assess trauma symptoms in young children. The first area begins with the criteria set forth for post-traumatic stress disorder (PTSD) in the *DSM-IV-TR* (APA, 2000). These criteria were modified to be more appropriate for preschool children by Scheeringa, et. al. (2003). These changes will be further described later in this chapter. Despite these changes, diagnostic criteria do not adequately capture the traumatic experiences of most children (Van der Kolk, 2005).

Since children typically exhibit common symptoms resulting from some type of interpersonal trauma, the trauma may not necessarily threaten their physical integrity or life, such as emotional/psychological abuse or neglect, yet this type of threat is required for the current diagnosis. The cognitive capacities of children, do not allow them to perceive events in the same manner as adults; therefore, different types of situations may be perceived as threats (Van der Kolk, 1998; 2001; 2002; 2005). Further, children may not be able to verbalize their fears or feelings of threat to an adult since developmentally they lack the skills to communicate

on the same verbal level as adults. Their behavior may signal distress, and they use expressive means of communication such as play, art, or other expressive mediums (Landreth, 2002). As a result, the concept of complex trauma was developed to describe chronic exposure to interpersonal trauma and subsequent impairment in multiple areas of functioning (Cook, et. al., 2005). Developmental trauma disorder further elaborated on the concept of complex trauma to develop a set of diagnostic criteria that are more appropriate for children than the PTSD criteria in the *DSM-IV-TR* (Van der Kolk; 2005).

Additional theoretical research into the differences between adult and child responses to trauma is found in the work of Steele and Raider (2001). They postulated that because of children's developmental level, they experience certain trauma symptoms even when they have not necessarily experienced what is identified as either a traumatic exposure by the *DSM-IV-TR* or as a complex trauma. According to Steele and Raider (2001), children can experience a variety of traumatic experiences from both violent and nonviolent sources. These experiences need to be responded to in a predictable manner because of children's emotional and cognitive needs and capacities at the time of the event.

Because most of the literature addressing childhood trauma deals with interpersonal trauma, the conceptualization of trauma for children typically focuses on the idea of disruption in attachment (Cook, et. al., 2005, Van der Kolk, 2005). Consequently a brief overview of attachment theory will be provided. A brief overview of Erik Erikson's psychosocial stages of development and Jean Piaget's cognitive developmental theory will also be provided. These developmental stages are important to understand because the current measure's design was based on this understanding of child development.

2.4.1 Description of Post-Traumatic Stress Disorder

The need to address trauma in young children is spurred by the presence of post-traumatic stress symptoms. Although the *DSM-IV-TR* provides a starting place for understanding trauma symptoms in children, without noting developmental differences in

several of the symptoms, it is difficult to rely totally on these criteria as a base for assessment in young children. Additionally because of the requirement of exposure to an actual threat of death, serious injury, or to the physical integrity of the child or someone else, the problematic nature of using these criteria as a sole base becomes compounded. Young children often have difficulty even understanding the nature of their own physical integrity, let alone that of someone else. Further, the criteria neglect to ascertain other traumatic experiences that interfere with young children's development of a sense of security and the formation of secure attachments to primary caregivers and significant others. Consequently, the criteria set forth in the *DSM-IV-TR* cannot form the basis of the model for assessing trauma in young children unless there is an ability of the diagnostic criteria to consider the developmental differences of children, their experiences of particularly interpersonal trauma, and the role of attachment and communication within their traumatic experiences.

2.4.2 Theoretical Description of Alternative PTSD Criteria

Since young children are developmentally different than adults, it has become increasingly important to determine if the current criteria for PTSD are appropriate for them or if alternative criteria are more in tune with their experiences. Scheeringa, et. al. (2003) noted that children who experienced traumatic events often could be assessed more accurately through behavioral observation rather than through verbal assessment and communication. Based on this notation, these authors developed an alternative set of PTSD criteria that were more amenable to the experiences of preschool children. Although the *DSM-IV-TR* allows for disorganized and agitated behavior, Scheeringa, et. al. (2003), assert that the first criterion that requires that demonstrating an extreme behavioral reaction after being exposed to a traumatic event should be eliminated for young children. They asserted that in preverbal children, such an expectation would be too high since children would not be likely to verbalize their emotional distress. Further, if caregivers were also traumatized or perpetrated the trauma, the caregivers

would not be likely to be aware enough or in tune with the children to notice any nonverbal or behavioral indications of distress (Scheeringa, et. al. 2003).

The second DSM-IV-TR criterion of PTSD involves re-experiencing the traumatic event. Scheeringa, et. al. (2003) suggested that preschool children do not necessarily need to find the memory or recollection of the event distressing because children are most frequently the victims of interpersonal trauma and consequently experience ambivalence about their traumatic experiences, loyalty toward their perpetrators, and other conflicting emotional and physical states (Cook, et. al., 2005; Van der Kolk, 2005). Furthermore, depending upon the type of trauma, they may not consider the experience as distressing.

For the third DSM-IV-TR criterion, avoidance or numbing, the diagnostic threshold of three required symptoms was too high for young children (Scheeringa, et. al., 2003). However, when the criteria threshold was reduced to only 1 required symptom, children exhibited an avoidance or numbing symptom (Scheeringa, et. al., 2003). Within this avoidance/numbing criterion, observed numbing or avoidance symptoms included constricted play, social withdrawal, or the loss of a previously acquired developmental skill. The specific description and inclusion of these behaviors helped children meet the criteria (Scheeringa, et. al., 2003).

The fourth DSM-IV-TR criterion, hyper-arousal, although not incredibly difficult for young children with the required two symptoms, is much easier for them to reach when modified to one symptom (Scheeringa, et. al., 2003). Suggested additional modification included temper tantrums or extreme fussiness as evidence of hyper-arousal (Scheeringa, et. al., 2003). Finally, children who participated in the research were repeatedly observed to exhibit new onset behaviors such as separation anxiety, aggression, and fears without obvious links to the traumatic experience. While not in the current diagnostic criteria for PTSD, Scheeringa, et. al. (2003) suggested that an additional criterion be added to address new onset behaviors such as separation anxiety, aggression, and fears without obvious links to the trauma.

Modifying the current *DSM-IV-TR* criteria for preschoolers is important because researchers must have more realistic criteria. For example, Scheeringa, et. al. (2003) found the lowest endorsement rate was for avoidance symptoms at 45% and the highest was for the new onset behavior with an endorsement rate of 79%.

Although the work related to the development of alternative criteria for PTSD in preschool children has been discussed previously, a look at the chronological development and merits of this empirical research will occur. Scheeringa, et. al. (1995) began the development of alternative criteria by conducting a literature review of 20 children described through case study. Since *DSM-IV* criteria was inadequate to diagnose and explain these children's trauma symptoms, these authors then operationally and behaviorally identified trauma symptoms seen in children under 4 years to attempt to come to a clearer diagnostic picture. The primary limitation of this study was the use of the researchers as the primary clinicians in the phase of the study in which alternative criteria was developed (Scheering, et. al., 1995). Although, interrater reliability was established, the role of clinician-researcher and the lack of double blinds in the researcher presents the possibility for researcher reactivity and demand characteristics as confounding variables. Further both the initial literature review to establish the inadequacy of the current *DSM-IV* diagnostic criteria and the phase in which the alternative criteria were developed both utilized very small samples, consequently further research was needed to determine if the hypothesized need and establishment of the alternative criteria was accurate (Scheeringa, et. al., 1995).

Scheeringa, et. al. (2001) further tested the procedural, criterion, and discriminant validity of the alternative criteria using a group of 15 traumatized children and a comparison group of 12 "nontraumatized children." In this particular study, strength existed in that two of the three raters were blind to the purpose of and training in the alternative criteria. The third rater had been trained in the alternative criteria and was used to mediate disagreements between the two blind raters on diagnostic issues (Scheeringa, et. al., 2001). The study was limited in that

the traumatized child group and the comparison child group were not matched, and therefore, the two groups possessed differences that could have affected the results of the study since they differed in age, gender, and ethnic diversity (Scheeringa, et. al., 2001). Finally, a significant limitation that could have greatly affected the validity of the results implying that the alternative criteria work best for traumatized children is that the traumatized group had experienced multiple and violent traumas (Scheeringa, et. al., 2001). Conversely, the comparison group also had experienced traumas including sexual abuse, motor vehicle accident, and witnessing shooting. Therefore, further research is needed to determine if the alternative criteria are sensitive enough to discriminate nonviolent and/or single-incident traumas (Scheeringa, et. al., 2001).

Scheeringa, et. al. (2003) utilized a much larger sample to validate the diagnostic validity of the alternative criteria. This time 63 non-traumatized children and 62 traumatized children ages 20 months to 6 years were used to determine the appropriateness of the alternative criteria. The study was also strengthened because the non-traumatized children were recruited as neighbors of the traumatized children or from a Head Start Center, with the condition that they had not experienced a life-threatening trauma (Scheeringa, et. al., 2003). While this exclusion criteria strengthened this comparison group more than the previous study, the possibility still exists that the comparison children have some type of vicarious trauma by neighboring and playing with children who have experienced trauma or the non-violent types of trauma such as divorce or loss. The study also possessed strength in that the traumatized children were recruited to include diverse types of trauma including medical traumas, terminal illness, violence-exposure, domestic violence, and self-selection (Scheeringa, et. al., 2003). While the researchers took precautions to eliminate researcher reactivity, since the interviewers were the primary researcher and research assistant, it remained a threat. Further research utilizing multiple sites and an even larger sample is indicated (Scheeringa, et. al., 2003).

While modification of the criteria is helpful by addressing some of the specific developmental needs of preschool children, they do not address the criteria related to exposure. Children may or may not experience an actual threat that endangers their life or someone else's; however, with 4.5 million children in the United States being investigated related to abuse/neglect reports, they frequently experience psychological abuse, chaos and instability, and neglect that prevent them from obtaining a secure attachment (ACF, 2006).

2.4.3 Description of Complex Trauma

To address concerns that children, especially young children, do not experience the criteria needed for exposure, however, they do experience significant trauma that adversely affects their lives and functioning, another concept is hypothesized. The American Psychiatric Association Task Force on Trauma began working to find reasons behind the differences among traumatic stress reactions in veterans and those individuals who experienced interpersonal types of trauma. As a result, initial work with adults who had experienced various types of trauma, including war, natural disaster, childhood sexual assault, and assault as an adult were compared based on later symptomatology (Pelcovitz, et. al., 1997; Van der Kolk & Fisler, 1994; Van der Kolk, et. al., 2005). Diagnostic criteria for Disorders of Extreme Stress Not Otherwise Specified based on symptoms of complex trauma, which is largely interpersonal in nature, began to be discussed in the task force based on the research. Later studies, between 1994 and 2005, began to include adolescents and some later latency age children who had also experienced interpersonal trauma (Pelcovitz, et. al., 1997, Van der Kolk & Fisler, 1994; Van der Kolk, et. al., 2005). As a result, the concept of complex trauma developed. Complex trauma occurs when children are exposed to chronic, long-term traumatic experiences, usually interpersonal in nature. These experiences prevent the development of secure attachments, generally with the primary caregivers (Cook, et. al., 2005). As a result of not developing a secure attachment base, children begin to experience difficulty with functioning in several areas,

such as attachment, biology, affect regulation, dissociation, behavioral control, cognition, and self-concept (Cook, et. al.2005).

Impairment in each of these areas is seen in a variety of ways. Dysfunction in the realm of attachment includes a wide range of problems, such as difficulties with boundaries, problems understanding others' perspectives and emotions, and being isolated from others. Biological problems can range from sensorimotor issues to somatic complaints to increased medical problems across several bodily areas and the life span (Cook, et. al., 2005). Problems with affect regulation may be noted through an inability to self-soothe, problems identifying and expressing feelings, or difficulty expressing needs. Dissociation is often seen with impaired memory, depersonalization, or altered states of consciousness (Cook, et. al., 2005).

Difficulty with behavioral control is what most often brings children to the attention of others. These problems range from impulsivity, self-destructive behaviors, aggression, addictive behaviors, oppositional behavior, trauma reenactment (Cook, et. al., 2005). Problems with cognition manifest as attention problems, trouble processing new ideas, academic issues, and other developmental areas. Finally, children who experience complex trauma have impaired self-concept and experience low self-esteem, body image disturbance, shame, and separation-individuation trouble (Cook, et. al., 2005).

Complex trauma addresses the reality that children can experience traumatic events, often repeatedly and in multiple forms, yet not necessarily have their physical integrity threatened or experience a direct threat of death or serious injury. It also notes that children do not worry about another person's physical integrity in many situations. Complex trauma conceptualizes the diverse areas of functioning that can suffer as a result of traumatic experiences of young children. The concept of complex trauma, however, does not present a set of diagnostic criteria upon which to assess a child following exposure to the trauma.

2.4.4 Description of Developmental Trauma Disorder

Based on the description of complex trauma and its correlated impairments in functioning, criteria for a diagnosis emerged. Developmental trauma disorder was hypothesized/developed to fit the differing experiences of children at their developmental level. It is theorized that developmental trauma disorder is comprised of “exposure, a triggered pattern of repeated dysregulation in response to trauma cues, persistently altered attributions and expectancies, and functional impairment” (Van der Kolk, 2005, p. 404).

The exposure criterion specifies that children have been exposed to some type of developmentally undesirable interpersonal trauma that has occurred repeatedly. The developmentally undesirable interpersonal trauma is evaluated according to a combination of personal, societal, and clinical standards, but most often takes the form of abuse or neglect (Van der Kolk, 2005). This term, trauma, covers multiple or chronic exposure. According to the disorder, children must also experience some type of negative emotional state related to the traumatic experience (Van der Kolk, 2005). Children then experience repeated dysregulation in various areas, which consequently leads to impairment in functioning that resembles what was discussed above in the area of complex trauma (Cook, et. al., 2005). These areas include affective, somatic (biological), behavioral, cognitive, relational (attachment), self-attributional (self-concept) (Van der Kolk, 2005). Common symptoms often include moodiness, depression, anxiety, stomach aches, headaches, other somatic complaints, sleep and appetite disturbances, sexual acting out, aggression, eating disorders, substance use, self-injury, thought distortions, self-blame, impulsivity, viewing the world as an unsafe place, clinginess, isolation, low self-esteem, poor body image, etc. (Van der Kolk, 2005). Children often believe that they will not be protected, that they will be victimized again, and that they cannot trust themselves or others. These beliefs meet the criteria for altered attribution (Van der Kolk, 2005). Finally, the criterion of functional impairment covers several areas including academic, family, and social functioning (Van der Kolk, 2005). While this list of impairment is extensive and covers numerous areas that

are covered in other parts of the *DSM-IV-TR*, the distinguishing features for traumatized children are the experience of multiple or chronic exposures to traumatic experiences that predate the incidents of dysfunction and the attribution of the dysfunction to the traumatic experience (Van der Kolk, 2005). Additionally, as discussed in the section on *DSM-IV-TR* disorders, other disorders with similar symptoms may exist comorbidly with trauma disorders (Strickler, 2007).

Developmental trauma disorder is increasingly close to the majority of trauma experiences for most children; however, it still does not address a significant portion of children who experience trauma in today's society. These children may experience significant trauma symptoms but not at a level that puts them at risk for a derivative of PTSD or developmental trauma disorder. These are the children who experience a single trauma or multiple traumas according to their perception based on their cognitive capacity. Some of these traumas may be interpersonal in nature, but others may not. For example, children may experience natural disasters, fire, and war. These traumatic experiences may coincide with interpersonal traumas or may occur in isolation, but they are not interpersonal in nature. Other children experience what most adults consider everyday events, yet due to their cognitive capacity, the disruption it causes in their lives leads to a traumatic experience. Such incidents can include the illness or injury of the child or a family member, the loss of a pet or loved one, or experiencing a parental divorce. Other events can include frequent moves, having a parent who has been deployed, or having a parent who returns from a deployment significantly mentally or physically changed. Such events cause a disruption in the children's lives and attachments, and they are not yet cognitively prepared to understand the implications of these changes leading them to be perceived as traumatic.

2.4.5 Theoretical Underpinnings of Childhood Trauma and Loss

Steele and Raider (2001) explored further the idea that, not only do children experience trauma on an interpersonal level that they can perceive to be life threatening, but that they also

can experience other forms of nonviolent trauma. Based in part on behavioral theory, fear of the traumatic experience is believed to be initially classically conditioned and then reinforced through operant conditioning. Consequently, the traumatic experience and the behaviors that surround the experience are not as important to address as are certain themes that are prevalent in the children's lives following the trauma (Steele & Raider, 2001). This concept was empirically explored with 150 children ages 3-17, 94 of whom were under age 10.

Regardless of whether children experience a violent traumatic event, such as abuse, neglect, or criminal activity, or a nonviolent traumatic event, such as a loss, moving repeatedly, or divorce, certain themes are present in their lives and behaviors. These themes are seen in their drawings, their play, and their interactions with others (Steele & Raider, 2001). Emotional themes include fear, terror, worry, hurt, and anger. Behavioral and cognitive themes include revenge, accountability, safety, power, and shifting from victim thinking to survivor thinking (Steele & Raider, 2001). The subsequent symptoms that accompany these themes have been described but include overall cognitive confusion, generalized fear, regressed behaviors, difficulty concentrating, changes in sleep and appetite patterns, decreased verbal communication, irritability, and magical thinking (Steele & Raider, 2001). Because many of these changes occur regularly in children, Steele & Raider (2001) empirically validated a child and adolescent questionnaire that is appropriate for children ages 6-12 or adolescents. Since these changes have been noted in experiences which are both violent and nonviolent, looking at the disruption in the children's attachment process and perceptions of the event becomes prudent.

2.4.6 Theoretical Underpinnings of Attachment Theory

Since young children perceive the disruption in their daily life events as unsettling, only those children with a secure attachment base can withstand the storm of significant changes in their lives. As a result, children who do not have secure attachments often perceive changes in their environment to be threatening, and those children who experience significant maladaptive

interpersonal events are at even greater risks for trauma (Van der Kolk, 1998; 2005). Because the idea of early childhood trauma is rooted in the concept that the traumatic experience disrupts children's ability to maintain a secure attachment, the concepts related to attachment theory are important. Attachment theory is based on the work primarily of John Bowlby and Mary Ainsworth. Bowlby's (1969) work began with the idea that infants need a secure attachment base. He believed that the connectedness between infants and mothers provided infants, not only with increased survival, but with a pattern that would last into later life and be the basis for future relationships (Bowlby, 1969). Essentially, mothers who are responsive to infants' needs provide them with security. Additional key concepts in Bowlby's attachment work include the ideas of a safe haven, a secure base, proximity maintenance, and separation distress (Bowlby, 1969).

According to Bowlby (1969), a safe haven is a place to which infants can return for comfort and security when they feel threatened, afraid, or distressed. Secure bases are the people who provide the bases that are safe and dependable from which children can explore the world (Bowlby, 1969). Proximity maintenance is children's desire to keep caregivers nearby to feel safe; and separation distress is children's feelings of distress when separated from caregivers (Bowlby, 1969). If children exist in a non-nurturing environment and only have their needs partially met, symptoms of excessive needs for love or revenge, guilt, and depression can occur (Slater, 2007). When children do not have their needs met and do not receive nurturing, they begin to experience listlessness, unresponsiveness, an inability to concentrate, symptoms of oppositional behavior, difficulty with feeling numb, and delays in their development (Slater, 2007). These concepts become increasingly important as trauma in young children is explored. The symptoms of inappropriate and non-nurturing attachments mirror trauma symptoms. Further, if interpersonal trauma is occurring within the home, children cannot experience safe havens or find secure bases, and consequently children will not be able to form secure attachments with their primary caregivers. Being unable to form secure attachments

paves the way for increased distress, dysfunction, and impairment in the cases of complex and developmental trauma due to the interpersonal nature of the trauma (Cook, et. al., 2005; Van der Kolk, 2005). As the areas of attachment and interpersonal relationships become increasingly dysfunctional, a vicious cycle can form; whereby, the increase in trauma increases the attachment dysfunction and vice versa (Bowlby, 1969; Cook, et. al., 2005; Van der Kolk, 2005). From a more universal definition of trauma and loss, Steele and Raider (2001) noted the impact of moving, divorce, loss, deployment, illness, and other types of trauma prevent children from feeling safe, particularly if their caregivers are experiencing distress about the same situation.

Ainsworth (1978) described three attachment reactions that infants and toddlers have when placed in a situation with a stranger – secure, ambivalent-insecure, and avoidant-insecure. Securely attached children exhibit minimal distress when their caregivers leave, and the children seek comfort from their caregivers. These behaviors occur because the children know that caregivers will return and caregivers are able to comfort the children (Ainsworth, 1978). Ambivalent-insecurely attached children become very distressed when their caregivers leave. These children often do not have their needs met by their caregivers; so they are unsure if they are able to depend on their caregivers to meet their needs (Ainsworth, 1978). Avoidant-insecurely attached children avoid their caregivers and tend to not discriminate between caregivers and other adults. These children frequently have been punished for attempting to have their needs met by caregivers (Ainsworth, 1978).

A fourth style of attachment has been hypothesized as disorganized attachment which combines features of both ambivalent and avoidant attachment (Solomon & Main, 1986). Children with this attachment style seem dazed, confused, and apprehensive, as well as, avoidant and resistant to the caregiver. At times, when elementary-aged or in adolescence, these children reverse roles with the caregiver and become parentified (Main & Hesse, 1990). The disorganized attachment style and its concomitant behavior patterns resemble children who

have been traumatized. Zeanah, Keyes, and Settles (2003) found that children who have experienced institutionalization and/or maltreatment often exhibit disorganized attachment patterns. Inconsistency in parental behavior, role reversal with parents, coercive discipline methods, punitive control, and a pattern of hostile-helpless parental interaction has also been linked to children having disorganized attachment to their primary caregivers (Lyons-Ruth, Melnick, Bronfman, Sherry, & Llanas, 2004). Further, parents who have posttraumatic stress disorder (PTSD) have been found to have children who have disorganized attachments to them, often with PTSD also occurring in the children. The disorganized attachment pattern is believed to occur because of a combination of confusing and ambivalent behaviors on the part of caregivers and experiences on the part of the children (Almqvist & Broberg, 2003). Because of caregivers in these situations often experiencing the trauma directly and the children witnessing it, the parents exhibit both frightened and frightening behavior; while, the children experience both the need to protect and the need to be protected. Such pushing and pulling of the children's emotions sets the children up for disorganized attachment patterns since caregivers are emotionally unavailable or unable to provide the secure base needed for the children because of their own traumatic issues (Almqvist & Broberg, 2003).

The dysfunction and impairment in attachment and subsequent social functioning that is asserted in complex trauma and developmental trauma disorder are seen through the lens of attachment theory and subsequent impaired attachment styles (Cook, et. al., 2005; Van der Kolk, 2005). Further, if children have already experienced one of the insecure attachment styles, the likelihood increases that an event will be perceived as traumatic because the children's needs have not been met and they feel less secure. From an attachment perspective, caregivers who have been traumatized also provide less security because they may be unable to meet children's needs due to issues with dealing with their own trauma (Steele & Raider, 2001). Hence, single incident traumas and other types of trauma and loss that are not related to complex trauma, still produce susceptibility to trauma symptoms in young

children because children will not have safe havens or secure bases available as they do when they are securely attached (Steele & Raider, 2001).

2.4.7 Theoretical Underpinnings of Young Children's Psychosocial Development

Although attachment begins the relational development cycle, children in the preschool and elementary school years, continue to have tasks that need to be achieved. Erik Erikson explored the psychosocial development of young children. Since much of the theoretical discussion above involves disturbances of attachment and psychosocial functioning, developmental expectations for 3-7 year olds are discussed next. Children ages 3-7 are the focus of the current investigation and are at high risk for interpersonal trauma (Administration for Children and Families (ACF), 2006). The ages from 3-7 encompass two of Erikson's stages of psychosocial development. These stages include initiative versus guilt, which focuses from approximately ages 3-5, and industry versus inferiority, which focuses from approximately ages 5-11 (Ginsburg, 1992).

During the preschool years, approximately ages 3-5, children are experiencing the task where they generally resolve the psychosocial issue of initiative versus guilt. During this time, Erikson postulated, that children begin to make basic choices for themselves, assert more autonomy, and assert more power over their environment (Ginsburg, 1992). Children begin to engage in directing some of their play and at times trying to direct others. When children meet with success, their initiative is rewarded and they increase in self-confidence (Hamachek, 1985). If they use too much power, they may become thwarted, experience disapproval and retribution, or suffer other negative consequences and feel guilt (Hamachek, 1985). Children with positive outcomes are believed to develop greater self-esteem and leadership skills, while children with negative outcomes, experience guilt and may withdrawal, become overly compliant or defiant (Hamachek, 1985). Children tend to become overly compliant when an environment is perceived as too controlling, such as extremely strict, authoritarian, or abusive households. Often overly compliant children have lost motivation to continue taking initiative

(Phelan, 2008). Other environments, such as institutional or residential settings, are set up to reinforce compliance, and such children to survive or receive pleasurable experiences become overly compliant. Some children perceive attempts to control their initiative as unrewarding and act out against adult direction. These children are often perceived as oppositional and/or defiant (Phelan, 2008). Children during this stage are at risk for trauma via illness and injuries. This type of trauma occurs because children who do not successfully achieve the ability to take initiative and engage in purposeful activity with a degree of planning engage in risky behaviors that become dangerous. Such dangers lead to common, preventable, yet traumatic injuries for children such as bicycle accidents, falls, etc. (Ginsburg, 1992). The exact amount of these injuries is difficult to estimate accurately due to the combined incidents of true accidents, which result in traumatic injury, versus the allegations of accidents upon which physical abuse is often blamed when treated by medical professionals. Further, accidental injuries are often complicated by the knowledge that children with a trauma history tend to be accident prone due to sensorimotor and muscle coordination dysfunction (Cook, et. al., 2005; Perry & Salavitz, 2006; Van der Kolk, 2005).

During the elementary school years, ages 5-11 approximately, children are experiencing the task where they resolve the psychosocial issue of industry versus inferiority (Ginsburg, 1992). Early elementary school aged children are expected to develop social and academic competence. By interacting with others and receiving positive feedback, children develop a sense of accomplishment and pride that leads to some level of competence (Hamachek, 1985). If children cannot meet the academic and/or social demands of school and do not receive positive feedback from others because they either receive negative feedback or inattention, children do not develop a sense of pride and do not establish confidence in their own abilities. This lack of confidence leads to a sense of inferiority (Hamachek, 1985). An additional demand at this age is the need to navigate the adult world. The adult world is seen in children's attempt to excel in sports and weaponry (Ginsburg, 1992). Children who are not

successful at accomplishing industry and consequently feel inferior become at risk for trauma through sports injuries and the highly competitive nature of junior athletics in today's society (Ginsburg, 1992). Children who live in areas prone to exploration of weapons become at risk for trauma related to coping with their feelings of inferiority.

While children are working on accomplishing the psychosocial stages of development, trauma can have an adverse effect. The conceptual frameworks discussed above illustrate how this developmental process becomes dysfunctional when children react to traumatic events. The abilities to do well in school and engage in play are often indicated as evidence of trauma symptoms (Cook, et. al., 2005; Scheeringa, et. al., 2003; Van der Kolk, 2005). Failure to successfully navigate through these two stages often mirrors trauma symptoms such as depression, low self-esteem, decreased energy, and excessive compliance or defiance (Hamachek, 1985; Steele & Raider, 2001).

It is also important to remember the need for children to experience play, to communicate through play, and to experience positive feedback and a sense of accomplishment in social interactions (Hamachek, 1985; Landreth, 2002). In addition, during these two psychosocial stages of development, children perceive themselves to be both objects and doers where they need to combine physical, social, emotional, and intellectual arenas. As a result, physical and social interactions need to be combined to remain on children's levels (Hamachek, 1985). Consequently, during assessment procedures with young children, it is essential to focus on the use of play and other means of nonverbal or action-oriented communication and to provide the children with positive reinforcement for assisting the assessor during the process.

2.4.8 Theoretical Underpinnings Based on Cognitive Development

Just as children in preschool and early elementary school years accomplish psychosocial tasks, which interact at times with trauma theory, they also begin to accomplish cognitive development tasks. Trauma theory interacts with young children's cognitive

development because this development affects how young children construct their interpretation of trauma, and how they are able to disclose the events of trauma. Well-informed assessment and treatment of trauma symptoms should also consider children's cognitive developmental levels. The basic foundation for cognitive development in children is based on the work of Jean Piaget. According to Piaget, children from ages 2-7 are in the preoperational stage of thought, which is further subdivided into the preoperational phase and the intuitive phase (Child Development Institute (CDI), 2007).

Children ages 2-4 are in the preoperational phase of preoperational thought. This phase involves gradually becoming more verbal about the surrounding world; however, verbal communication remains very egocentric, meaning children still believe they are the center of the universe (CDI, 2007). Children are beginning to engage in some symbolic play so they are beginning to understand that objects can be used for different things and are beginning to play "pretend." In the earlier ages of this phase, children still tend to engage in relatively solitary or parallel activities; they engage in side by side activities, and are not highly interactive (CDI, 2007). In the earlier ages, these children often have difficulties with object permanence, or believing that objects still exist if they are not in the children's presence. However, as children get a bit older, they begin to communicate with basic language skills about objects that are present or absent (CDI, 2007).

Children ages 4-7 are in the intuitive phase of preoperational thought. Their speech and play becomes more social and less egocentric (CDI, 2007). These children can grasp some logical concepts; however, they maintain a high degree of belief in magical thinking, and despite possessing some ability for logic. They tend to focus only on one portion of an item or situation to the exclusion of all others, thereby committing logical fallacies (CDI, 2007). They do not have a firm grasp on reality and believes that their perception is the accurate one. Consequently, they tend to hold fast to their perceptions despite contradictory evidence. They

focus on the moral authority of “do’s” and “do not’s” as told to them by powerful adults (CDI, 2007).

When communicating with young children, adults should be aware of children’s mechanisms of expression. Children communicate in ways that make sense of their experiences, but not necessarily in ways that make sense to adults. As a result, adults need to view communication with children as a way to make sense of what children are doing to make sense of their experiences (Prambling, 2006). Further, many means of children’s communication contains qualities that adults have outgrown and sometimes forgotten. Children often use animism, magical thinking, personifications, and artificial expressions when they communicate (Church, 2006; Prambling, 2006). Animism can be helpful when communicating with children because children believe that stuffed animals, puppets, etc. have the same experiences and feelings that they do. This form of thinking can be used to assist with building rapport (Church, 2006). Pretend play, specifically of a nurturing type, gives children the ability to develop problem solving skills and empathy because it focuses on children’s cognitive capacities and communication skills (Brazelton & Greenspan, 2006). The difficulty with children in this stage of cognitive development lies in the magical thinking they possess. While magical thinking can be a useful tool as described above, it can also present problems, especially for children who experience trauma since magical thinking can lead them to believe that they caused events to happen (Church, 2006).

When looking at trauma in young children, their level of cognitive development is essential for understanding how different life events become interpreted or assimilated as traumatic experiences, whether these events are situations of trauma or loss, or experiences of complex trauma (Cook, et. al., 2005; Steele & Raider, 2001; Van der Kolk, 2005). Equally important to consider is children’s cognitive functioning when creating measures to assess trauma symptoms. The knowledge that children’s cognitive developmental level affects perception of trauma so that some children perceive moving to other states traumatic, while

other children experience abuse and neglect as traumatic needs to be considered in clinicians' assessments of children (Cook, et. al., 2005; Steele & Raider, 2001; Van der Kolk, 2005). Further, since children in this stage of cognitive development are egocentric, engage in magical thinking, and have limited verbal abilities, it is imperative that assessment measures focus on the child's experiences, yet are presented in a manner that children with limited verbal abilities can understand (CDI, 2007).

To provide children a sense of safety that may be needed based on their psychosocial or attachment development, friendly stuffed animals or puppets can be used. This modality contributes to the magical thinking at this cognitive stage where children also believe that the animal had a similar experience. Assessment measures need to incorporate an understanding not only of the symptoms that the measure is designed to assess, but also be developmentally appropriate for the population upon which it is to be used. Consequently, an understanding of attachment, psychosocial, and cognitive development theories are important when developing assessment measures for young children.

2.4.9 Theoretical Framework for the Assessment Instrument

The child development theories discussed above all need to be blended together to make an appropriate assessment instrument for children who have experienced trauma. Each theory contains important elements that relate to children with traumatic experience. Attachment theory informs trauma assessment and practice because it is inextricably interwoven with the lives of children who experience interpersonal trauma. These children cannot form secure attachments with their caregivers because the people who are supposed to be caring for them are in some way betraying them or abusing them. Consequently, they form avoidant, ambivalent, or in most cases, disorganized attachments (Ainsworth, 1978; Almqvist & Broberg, 2003; Lyons-Ruth, et. al., 2004; Main & Hesse, 1990; Zeanah, et. al., 2003).

Attachment dysfunction then ties into social functioning because children have not experienced secure bases from which to experience the world. As a result, the next lens

through which assessment must be considered is the psychosocial lens. As discussed above, children who have experienced trauma in the initiative versus guilt phase suffer one of two ways. They either become overly compliant due to their need to survive in controlling environments or they act out in ways that lead them to be perceived as oppositional and defiant because they are attempting to control an environment that they perceive as unrewarding and hostile (Phelan, 2008). Children in the industry versus inferiority stage also struggle with their development when they have not developed a secure attachment base because their feelings of inferiority lead them to engage in more risky activities in attempts to fit in with peers which can lead to physical injuries (Ginsburg, 1992). Further this age group also has more interaction with physical injuries that cannot be determined to be actual injuries or results of abuse because they are more prone to being physically active, and conversely children with a trauma history are more prone to have sensorimotor and muscle coordination problems making them more likely to receive additional traumatic injuries (Cook, et. al., 2005; Perry & Salavitz, 2006; Van der Kolk, 2005).

Just as attachment difficulties lead to problems with psychosocial functioning, they also lead to problems with cognitive functioning. Therefore, assessment must also consider cognitive theory as an important component in child development. Children who have experienced trauma are affected in their cognitive development. They have been noted to have difficulty with time-space orientation, problems with attention and concentration, and learning problems. Despite these specific difficulties, assessment considerations for children who have experienced trauma need to be similar to children who have not experienced trauma when it comes to their cognitive developmental functioning. Based on cognitive developmental theory, children will be egocentric. For children who have experienced trauma, this egocentricity is significant in that they will perceive the trauma to be completely about them, making it become monumentally significant in their lives, which leads to the different perceptions of daily life events that children have (CDI, 2007). As a result, assessment needs to consider that children

may perceive moving or the death of a pet as traumatic as perhaps a severe illness or an abuse incident depending on the children's ages. Children within the designated age group also possess a high degree of magical thinking with only the beginnings of a foundation for logic. Consequently, they perceive one part of situations and exclude relevant information about the rest of situations. Again, this perception has significant meaning for children who experience trauma, especially interpersonal trauma because it leads them more to a tendency to internalize blame (CDI, 2007; Cook, et. al., 2005; Van der Kolk, 2005). Finally, with the development of appropriate assessment, children's ability to believe in animism is very helpful. Children believe that animals have the same properties as humans. Using stuffed animals and puppets to communicate, especially for assessment purposes is very helpful for children who have experienced trauma because it provides them with a safe method and emotional distance with which to discuss their symptoms and experiences (CDI, 2007).

Through the understanding the attachment theory, psychosocial development theory, and cognitive development theory are all intertwined and affect the way that children who have experienced a trauma live their lives and perceive their experiences, the a measurement instrument can be created that is developmentally appropriate because it is informed by theory. Further after the use of developmental theories has been incorporated, specific trauma theories, such as complex trauma theory and developmental trauma disorder that address specific areas of dysfunction in children need to be included to ensure that all areas in which children who experience trauma suffer are included in an assessment measure. In addition to the attachment and psychosocial (interpersonal) area and cognitive area of functioning covered by the developmental theories, trauma theories also address behavioral functioning, self-concept functioning, somatic functioning, affective functioning, and dissociative functioning. Further, an assessment measure should consider not only the developmental needs of children through considering the cognitive and psychosocial developmental needs of the children it was designed to assess, but the measure should also consider any modifications or adaptations needed in

diagnostic criteria, as addressed through the alternative criteria for preschool children set for by Scheeringa, et. al. (2003). Through the combination of attachment theory, psychosocial development theory, and cognitive development theory in the design of the procedures upon which to base the trauma measure, and the combination of complex trauma theory, developmental trauma disorder theory, and the proposed alternative criteria for preschool children, a comprehensive assessment instrument to assess the severity of trauma symptoms in children ages 3-7 who have experienced a trauma should have a sound theoretical base.

2.5 The Use of Testing Instruments in Young Children

Assessment in young children is often a difficult endeavor because of their limited verbal and cognitive skills. Children's primary mode of communication is play making traditional means of communication used by adults, such as writing and talking, a highly difficult and often unproductive undertaking with children (Landreth, 2002). It is essential that children are assessed via a modality that is congruent with their developmental level that encompasses and incorporates their primary mode of communication. However, many assessment instruments utilized with young children either continue to rely solely on verbal report or rely on caregiver report information. Caregiver report information becomes problematic when assessing specific syndromes or subsets of symptoms because caregivers are often not in tune with or are unaware of certain internal experiences children have (Mesman & Koot, 2000). This chapter will explore some of the available testing instruments for young children for global emotional and behavioral problems, as well as, some trauma specific measures in an effort to delineate explicitly the need to develop a self-report measure for trauma symptoms in young children.

2.5.1 Measures Related to Emotional and Behavioral Problems

The Preschool Age Psychiatric Assessment is a semi-structured parent interview that is used with the parents of children ages 2-5 in order to ascertain DSM-IV-TR diagnoses. This assessment has been found to demonstrate good test-retest reliability and good convergent validity with the Parent Diagnostic Interview Schedule for Children and the Structured Clinical

Interview Schedule for the DSM-III-R (Chrisman, et. al., 2006). While these measures can be helpful assessment tools, they fail to assess children from the children's points of view. Consequently self-report measures for children need to be developed and critiqued.

Dominic Interactive is a child report measure that uses a computer generated picture system to assess psychiatric symptoms related to depressive, anxiety, and externalizing disorders in 6-11 year olds. It has been suggested that the instrument could be used with children as young as 4 and 5 (Valla, Bergeron, & Smolla, 2000). Test-retest reliability was established between 7-12 days (mean 8.33 days) and was found to be reasonably acceptable ($K = 0.60$ for 21 symptoms, $0.50-0.59$ for 50 symptoms, and $0.40-0.49$ for 14 symptoms). However, when symptoms were divided based on disorder scales, test-retest reliability improved ($K = 0.71$ to 0.81) (Valla, et. al., 2000). Internal consistency for the measure varies according to diagnosis ($\alpha = 0.64$ for conduct disorder, 0.83 for major depressive disorder and attention deficit hyperactivity disorder, 0.67 for simple phobia; 0.78 for separation anxiety disorder, 0.66 for overanxious disorder, and 0.80 for oppositional defiant disorder). Internalizing and externalizing scales both had acceptable internal consistency ($\alpha = 0.89$) (Valla, et. al., 2000). The instrument is able to differentiate between children with known psychiatric problems and children without known psychiatric problems and correlates well with the Child Symptom Inventory, which is a parent-report measure; however, the correlation decreases on the internalizing symptoms (Chrisman, et. al., 2006). Despite the merits and innovation of the Dominic Interactive, the instrument possesses some limitation in that its test-retest reliability scores are a bit low; however, with children, growth, maturity, and attention span on a daily basis can account for these issues. Further limitations exist in that the measure does not fully account for the diagnostic categories it attempts to assess according to the DSM. In part, this limitation is due to the developmental level of the children the measure assesses; however, the limitation of the instrument is also in its inherent simplicity with purely "yes" and "no" response categories (Valla, et. al., 2000). Another limitation exists in that the measure's

response categories have children indicate if they are like Dominic by responding “yes” or “no” assuming that children will respond to the behavioral indications. However, due to the personification of Dominic, it is possible that children who remain very concrete in their thinking, will respond in a fashion indicative of not wearing the same clothes, having the same hair, etc. Since the questions do not ask directly about behavior or frequency this limitation is inherent in the design, making the instrument appropriate only for older children and children without developmental or certain types of learning disorders (Valla, et. al., 2000).

The Preschool Symptom Self-Report (PRESS) is a 25-item measure in which the child is shown two pictures, one that displays the presence of the symptom and the other that displays the absence of the symptom. The child then chooses the picture that best represents his/her experience. This measure is designed to assess depression (Ederer, 1998). It did not demonstrate a high correlation when correlated with caregiver/parent-report and teacher-report measures. This lack of correlation with adult-report measures was hypothesized to be related to the internalizing symptoms related to depression of which parents and teachers may not be aware or the possibility that the children were confused by the pictorial representations of symptoms/problems (Ederer, 1998). The PRESS has low internal consistency for child-rating ($\alpha = 0.56$); whereas, parent and teacher ratings are range from mediocre to good ($\alpha = 0.68$ and 0.95 respectively). Test-retest reliability for children demonstrates concern ($r = 0.52$) while teachers test retest reliability on their depression measure demonstrated respectable scores ($r = 0.60$ to 0.89) (Ederer, 1998). This research provided the important notation that teachers’ and caregivers’ perspectives often differ from children’s reports. However, the research is limited by the use of different measures for the teachers, caregivers, and children. To establish a true correlation among the responses, the same measure should have been used. Another limitation of this study was the use of double-barreled questions on the assessment instrument. Items such as “Sad and is crying most of the time” could have multiple responses as the possibility occurs for a child to be sad but not crying, crying but not sad, or

both (Ederer, 1998, p. 102). Finally, some of the items on the measure do not seem to have validity for internal or external symptoms of preschool depression – i.e. “Other boys and girls do not like this boy.” (Ederer, 1998, p. 102). This question potentially assesses aggression, depression, antisocial behavior in other children, or merely shy behavior. The study did possess strength in assessing by self-report a relatively large group of young children in a developmentally appropriate manner.

The Preschool Feelings Checklist is a parent-report instrument that assesses depression in preschool children. It demonstrated convergent validity with the Child Behavior Checklist and the Structured Interview for Children. It also demonstrated the ability to accurately detect depression in children who had been previously diagnosed with major depressive disorder and the ability to discriminate among children who had been diagnosed previously with attention deficit hyperactivity disorder and/or oppositional defiant disorder. The primary concern with this particular measure’s use in young children was that it was not highly sensitive in ascertaining particular internal states, such as “feels guilty” due to being a parent-report measure (Luby, Heffelfinger, Koenig-McNaught, Brown, & Spitznagel, 2004).

The Children’s Moods, Fears, and Worries is a parent-report measure designed to assess internalizing behaviors related to anxiety and depression in toddler and preschool age children. This measure demonstrated high correlation to the internalizing scale on the Children’s Behavior Checklist and to the Infant-Toddler Social Emotional Assessment; however, the authors assert that it is more inclusive than these measures because it includes inhibition and negative emotionality. It demonstrates high internal consistency ($\alpha > .80$) and good test-retest reliability over a 2 year span ($r > .50$) (Bayer, Sanson, & Hemphill, 2006). One of the predominant limitations with this measure is its testing on a small sample (112 respondents). In order to adequately validate a measure with 74 items through exploratory factor analysis, a larger sample size would have been needed. Further, although the measure demonstrated adequate test-retest reliability, the second factor that loaded, solitary play, needed to be

dropped at the retest (Bayer, et. al., 2006). This dropped factor may not have been due to a deficit in the measure, but rather to developmental changes in children between the ages of 2 and 4 as interactive play becomes predominant between ages two and three. Consequently, solitary play at age 2 may have been perceived as concerning and outgrown by age 4 making further research in this factor needed (Bayer, et. al., 2006). The research possessed strengths in the lengths the researchers went to by establishing the initial constructs in the measure, ensuring face and content validity. Further research is needed to demonstrate known-groups validity, and predictive validity for diagnostic usefulness (Bayer, et. al., 2006). Finally, the measure is based on parent-reports of internalizing symptoms; consequently, research into the accuracy of these reports and comparison to child-reports is needed (Bayer, et. al., 2006).

The Berkeley Puppet Interview (BPI) is a self-report measure that uses puppets to assess children's beliefs about their social, emotional, and academic competence. It was designed for children ages 4-8 (Measelle, Ablow, Cowan, & Cowan, 1998). This assessment provides the children the ability to incorporate both play and verbal abilities to express beliefs about their competence. Two puppets make polar extreme comments about competence in a specific area. Children then indicate with which puppet they identify. The interview then rates the child's response on a 7 point Likert scale. The test demonstrates modest internal consistency ($\alpha > .70$) and good test-retest reliability across grade levels for subscales ($r = .24 - .58$). Consistency with parent or teacher report varies depending upon the subscale (Measelle, et. al., 1998). The BPI results demonstrates evidence that adult-report and child-report correlations between response items can vary in strength, even when significant. Of particular concern for the purposes of the present research are the domains of depression-anxiety, aggression-hostility, and academic competence. Academic competence in preschoolers yielded no significant correlations; while in kindergarteners, child-teacher responses were moderately and significantly correlated ($p \leq .01$) and child-mother responses were weakly and significantly correlated ($p \leq .05$); first graders maintained the same

correlations as kindergarteners, however, both were significant ($p \leq .01$) (Measelle, et. al., 1998). In the areas of depression-anxiety and aggression-hostility, the study did not measure preschoolers, which is a serious limitation. However, moderate, significant correlations were found in the depression-anxiety realm for both child-teacher report and child-mother report ($p \leq .01$). In the aggression-hostility realm, moderate, significant correlations were found between child-teacher reports ($p \leq .001$) for both kindergarteners and first graders, and between child-mother and child-father reports ($p \leq .01$) for first graders; while weak, significant correlations were found between child-mother and child-father reports ($p \leq .01$) for kindergarteners (Measelle, et. al., 1998). Although, these findings were significant, the limitation for practical purposes is that the correlations are weak or moderate in strength indicating that perhaps the agreement between the adults and children is not as robust as it should be for diagnostic and clinical assessment purposes. One of the main limitations of this study was the small sample size and lack of economic, ethnic, and geographic diversity in the sample. The sample was predominantly Caucasian and middle class, all drawn from the San Francisco area, making generalization difficult (Measelle, et. al., 1998). Finally, although, the researchers developed a highly operationalized scoring method for the BPI, the length of time and intermingling of free play and snack with the testing method, as well as, the possibility of social desirability bias or response set due to the length of the measure may confound some of the results (Measelle, et. al., 1998). This measure does, however, provide an important venue for giving children an opportunity and means to express themselves in an age-appropriate manner about their own symptoms.

The Child Behavior Checklist (CBCL) exists in two versions depending on the child's age. The CBCL preschool version is for children ages 18 months to 5 years and 364 days; whereas, the CBCL school age version is for children 6 to 18 years. Each version has internalizing, externalizing, diagnostic, and validation scales. The preschool version also possesses a language development scale. The CBCL for preschool children is a 100 item

Likert scaled measure that assesses internalizing and externalizing behaviors in a fashion similar to the school age measure but also assess language development. It has a high internal consistency ($\alpha = .63-.96$), a high test-retest reliability ($r = .57-.92$), and good inter-rater reliability ($r = .49-.76$) (Flanagan, 2004). Children ages 6-7 and 364 days caregivers completed the CBCL for school age children.

The CBCL for school age children has both a parent report and a youth report measure; however, to maintain consistency with the preschool version, only the parent report measure was given. The CBCL for school age children is a Likert scored measure that assesses internalizing and externalizing behaviors on a variety of subscales including diagnostically oriented scales, aggression, anxiety/depression, social problems, inattention, somatic complaints, thought problems, rule-breaking, and withdrawal. It has high test-retest reliability ($r = .79-.90$), good inter-rater reliability ($r = .49-.76$), and high internal consistency ($\alpha = .55-.97$). It was normed consecutively on several samples of children from diverse ethnic and socioeconomic backgrounds so consequently is acceptable to use with varying groups of children. Both measures demonstrate good construct and criterion validity ($r = .38-.87$) (Flanagan, 2004).

The strengths of the CBCL include that it has been touted as a well-established research and descriptive tool that has been used in nearly 2000 empirical studies, including studies for the armed services. The CBCL has also been translated and tested for reliability and validity in nearly 50 languages (Furlong, 2004). The predominant concern for the CBCL is the lack of a strengths based approach, which likely occurs because of its focus on *DSM-IV* diagnostic parallels; however, this focus can cause ethical concern as parents are consistently asked to focus on the problems of their children in multiple areas, and as the fields of behavioral sciences focus on more strengths-based assessment techniques (Furlong, 2004). Further, some wording in the measure can cause confusion to respondents who may be unfamiliar with psychological terminology (Doll, 2004). The CBCL also does not contain any items designed to

detect social desirability bias, which occurred in an effort to maintain face validity. Due to the length of the CBCL, and the presence of a child-report version for older children, the omission of such items is concerning as some of the scales seek to measure behaviors associated with conduct disorder or other socially unacceptable behaviors. Consequently researchers or practitioners utilizing the scale with juvenile offenders may receive false data due to underreporting of symptoms (Furlong, 2004). Despite these concerns, the CBCL possesses strength in that the original sample was diverse and large; however, the non-referred comparison group does hold the possibility that children with problem behaviors were a part of this group yet had not presented for treatment (Furlong, 2004).

2.5.2 Trauma Specific Measures

The majority of trauma specific measures assess trauma symptoms in children older than the target population for this study. These measures typically require some reading ability and consequently begin around age 8. Therefore, measures that do not encompass the target population of 3-7 year olds will not be discussed.

The Child Sexual Behavior Inventory (CSBI) is a 38 item parent-report measure that differentiates normal sexual behavior from clinical sexual behavior in 2-12 year olds. It provides clinicians with 9 subscales to determine based on the child's gender and age, what sexual behaviors can be expected and what sexual behaviors are indicative of traumatic acting out behaviors (Friedrich, Grambsch, Damon, Hewitt, Coverola, & Lang, 1992). These subscales include boundary problems, voyeuristic behavior, exhibitionism, self-stimulation, gender role behavior, sexual anxiety, sexual interest, sexual intrusiveness, and sexual knowledge. This measure demonstrates high internal consistency with both the nonclinical and clinical populations (alpha = .82 and .93 respectively) (Friedrich, et. al., 1992). It also demonstrated acceptable test-retest reliability ($r = .47$). This correlation was deemed to be acceptable as the children in the clinical group were in weekly therapy throughout the assessment process. The

Child Sexual Behavior Inventory possesses specific items that also correlate significantly with the externalizing subscale of the CBCL (Friedrich, et. al., 1992).

The Child Sexual Behavior Inventory possesses strength in that it was normed on a diverse sample from both Los Angeles County and Minnesota (Bernt, 2004). Despite this geographic difference in the attempt to provide a diverse sample for norming the sexual behavior of traumatized and non-traumatized children, further research and more extensive sampling needs to be done to account for an even more diverse geographic and cultural backgrounds as even these two areas remain unique (Bernt, 2004; McKnight, 2004). Another limitation of the CSBI arises from the normative data reports all coming from female caregivers. Although data has been later correlated with teachers and male caregivers, further study needs to be done to determine the consistency with which female caregiver report and male caregiver report correlate to determine if the normative data are accurate (Bernt, 2004). Another issue with the CSBI is the absence of the description of correct classifications – i.e. true positive, false positive, true negative, false negative – in cases of sexual abuse. This issue is particularly concerning when this instrument is used as an assessment tool for sexual abuse despite warnings that it needs to be used in conjunction with other information, particularly given the instructions that the female caregiver is the sole informant (McKnight, 2004). A dual strength and limitation arise in the inclusion of developmentally related sexual behaviors. The measure acknowledges that certain sexual behaviors are age-appropriate and not deviant; however, greater description and operationalization needs to be given of these behaviors with more research evidence for their normalization for each age provided, as well as, issues such as developmental disorders taken into consideration (McKnight, 2004). As mentioned above, the use of a large non-clinical sample is a strength, and a fairly large clinical sample is also a strength; however, greater diversity in sampling is needed, as well as, the acknowledgement that there is not a guarantee that non-clinical samples are truly non-clinical due to the rate of non-disclosure with issues of sexual abuse. Finally, the strength of the CSBI is that it can be a

useful screening tool in conjunction with other sources of data collection including different measures and informants (Bernt, 2004; McKnight, 2004).

The Children's PTSD Inventory is a 50 item clinician administered self-report interview that targets DSM-IV symptoms of PTSD. Its target age group is 6-18 year olds, and it assesses the five symptom areas of avoidance and numbing, situational and exposure reactivity, distress and impairment, arousal, and reexperiencing (Saigh, Yasik, Oberfield, Green, Halainandaris, et. al., 2000). It has high internal consistency (Alpha = .53-.89 at subtest level and .95 at diagnostic level) and very strong interrater reliability ($r = .88-.96$ at subtest level and .98 at diagnostic level). The Children's PTSD Inventory also possesses good test-retest reliability ($r = .66-.94$ and .88 at diagnostic level) (Saigh, et. al., 2000).

The development of the Children's PTSD Inventory possessed strength in that it was piloted on diverse youth to ensure understandability of the questions, and the researchers utilized a diverse panel of experts to ensure content validity (Saigh, et. al., 2000). Despite this strength in development, the sample used to validate the measure was small, particularly for the comparison group of non-traumatized children ($n = 22$). Although the sample possessed diversity in economic and ethnic background, even the traumatized sample did not have a robust size ($n = 104$); however, larger sample sizes are often difficult to achieve when working with traumatized children due to ethical and consent issues. Consequently, further research is needed with larger sample sizes in multi-site locations to improve generalizability (Saigh, et. al., 2000). Another limitation of the study was the exclusion of children who were traumatized by abuse or neglect. Since most children who are traumatized experience interpersonal trauma (Cook, et. al., 2005), the exclusion of this group of children warrants further research about the measures usefulness to assess PTSD in all types of traumatic situations (Saigh, et. al., 2000). A final limitation is the lack of specificity of the measure itself. Since the researchers designed the measure for 7-18 year olds, less general terminology can be used than when dealing with preschool and early elementary school children. A sample item for situational reactivity is, "Did

you feel very upset when this happened?" (Saigh, et. al., 2000, p. 378). The use of the word, "upset" to children within this age group leaves room for interpretation to mean terrified, scared, mad, frustrated, depressed, etc., consequently, preventing the researcher from necessarily finding exactly what he/she may be assessing. Justification of such terminology or the use of more accurate language may strengthen the measure (Saigh, et. al., 2000).

The Trauma Symptom Checklist for Young Children was developed by Briere (2005) and is a 90 item parent-report measure that assesses for trauma symptoms on several subscales. These scales include anxiety, depression, aggression, traumatic intrusion, traumatic avoidance, traumatic arousal, traumatic total, dissociation, and sexual concerns. There are also two validity scales within the instrument. The scores are broken into ages groups for 3-4 year olds, 5-9 year olds, and 10-12 year olds (Briere, 2005). The measure was normed on approximately 220 caregivers whose children were predominantly female (62%) and predominantly nonwhite (62%). The mean age of the children was approximately 7 years. Internal consistency varied greatly depending upon the scale being measured. The response level scales demonstrated high internal consistency ($\alpha = .73-.86$); whereas, the atypical response had a wide range of internal consistency ($\alpha = .36-.93$) which depended upon the child's age (older children had more varied responses); the clinical scales demonstrated the highest levels of internal consistency ($\alpha = .78-.93$). Test retest reliability was reasonably high ($r = .68-.96$) (Mackler, 2004). The normative research on the TSCYC possessed strength in that it utilized a stratification sample based on U.S. Census data. However, the sample was based on email solicitation which may have inadvertently skewed the data toward the higher socioeconomic class (Stinnett, 2004). Despite this concern, the researchers continued to sample until each demographic cell was filled, thus strengthening the research by ensuring diversity. The standardization sample was large including 750 children; however, the majority of respondents were female caregivers (61%) (Stinnett, 2004). Despite the difference in adult respondents, there were not significantly different numbers for the genders and ages of the

children being assessed (Stinnett, 2004). The primary limitation of the validation research using a clinical sample is that the majority of the sample was the female caregivers (91%) of female children (62%). Consequently the results of the instrument may be different for boys or may vary when completed by male caregivers (Mackler, 2004). Additional, practical concern occurs when considering the possibility that caregivers attend less to the possibility that boys can experience trauma, especially sexual abuse, as often as girls do. Another limitation lies in some overlap of constructs on the TSCYC. Consequently further research is needed to determine if all of the scales are necessary or if some can be collapsed (Stinnett, 2004). Despite these limitations, the strength of the TSCYC lies in its ability to differentiate between traumatized and non-traumatized children in non-abusive situations and abused and non-abused children. The TSCYC also possesses strength in that the researcher found significant differences among age groups, and therefore, the measure has clinical and normative data based on age categories 3-4, 5-9, and 10-12 (Mackler, 2004; Stinnett, 2004).

2.6 Present Study

The purpose of the present study is to design and validate a child-report measure of trauma symptoms in 3-7 year olds. Specifically, the measure is designed to assess the severity of trauma symptoms in children who are known to have already experienced a trauma. Specifically, the purpose of the present study is a validation study of the instrument. Consequently, the study will assess two groups of children, one group of children who has had traumatic experiences and one group of children who has not had traumatic experiences. The study will specifically set out to assess the measure's test-retest reliability, internal consistency, convergent validity, discriminant validity, and known groups validity. Further, because discrepancy between caregiver reports of symptoms and child reports of symptoms in children who have experienced trauma have been noted in the literature (Almqvist & Broberg, 2003; Chrisman, et. al., 2006) the study will assess the rate of agreement between the caregiver-report version of the measure and the child-report version of the measure. Based on the

literature, it is hypothesized that there will be little to no correlation between the caregiver-report version of the measure and the child-report version of the measure. The assessment instrument designed for this study is entitled the Trauma Assessment for Young Children. It is a 9-item Likert scale item designed in a developmentally appropriate manner for children ages 3-7.

CHAPTER 3

METHOD

The current study developed an assessment instrument designed for children ages 3-7 years. The development of self-report measures even for young children is essential because parents and other caregivers frequently do not notice or minimize children's internalizing behaviors (Mesman & Koot, 2000). Parents and other caregivers may miss children's internalizing behaviors due to the difficulty that externalized behaviors present (Ederer, 1998; Mesman & Koot, 2000). Since many trauma symptoms are internal experiences, such as intrusive thoughts, reminder sights, reminder sounds, frightening dreams, avoidance symptoms, anxiety, depression and so forth (APA, 2000; Cook, et. al., 2005; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005), the assessment measure for children is essential and will be compared with the caregivers' reports.

This chapter describes the method of the present study. The participants involved in the study are described initially, including the sampling method and the clinical sites from which they were obtained. The training and background of the primary researcher and research assistant are also described. The way in which the Trauma Assessment for Young Children was developed is described in detail, as well as, a description of the original measure, its trial, and subsequent revision, leading to the current version. A description is provided of the additional measures used in the study, as well as, the procedures for actually conducting the validation study of the Trauma Assessment for Young Children. Finally, a plan for the data analysis of the results of the study is described.

3.1 Participants

The participants were 47 children ranging in age from 3-7 years (Mean = 4.24, SD = 1.07). The participants included 20 (42.6%) males and 27 (57.4%) females. Seventeen children were (36.2%) White, 17 (36.2%) Black, 6 (12.8%) Hispanic, 5 (10.6%) biracial or mixed ethnic origin, and 2 (4.3%) children did not have their ethnic origin identified. The non-trauma group consisted of 23 (48.9%) children, and the trauma group consisted of 24 (51.1%) children. The children were divided into two groups based on evidence of interpersonal trauma. Children who had experienced interpersonal trauma, defined as witnesses domestic violence, experiencing some type of abuse, a combination of these events, of one of these events and a non-interpersonal type of trauma, such as deployment, moving, divorce, etc. were placed in the group of children with trauma. Children who had not experienced interpersonal trauma were placed in the children without trauma group; although, these children may have experienced a parental deployment, multiple moves, divorce, or major illness. Head Start children were initially designated children without trauma; however, two of these children were placed in the children with trauma group due to caregiver reporting that the children had witnessed domestic violence.

The children were selected through a convenience sample from a variety of locations within Bell, Coryell, Hill, McLennan, Bosque, Limestone, Freestone, Falls, and Tarrant counties in Texas. These counties encompass both rural and medium-sized urban areas. The children were sampled from a variety of locations including Head Start (which serves Bell County), the Advocacy Center for Crime Victims and Children (which serves McLennan, Bosque, Freestone, Hill, Limestone, and Falls Counties), the Children's Advocacy Center (which serves Bell and Coryell Counties), and Safe Haven of Tarrant County. Although children are the primary participants, non-offending caregivers (in abuse cases as determined by child protective services, child-report, or the appropriate advocacy center) also participated in the completion of measures. While the advocacy center locations exclusively serve traumatized children, the possibility existed that children at the other locations also had experienced trauma through

divorce, familial death, illness, or injury, parental deployment, or personal illness or injury, as well as, the possibility of undisclosed abuse.

Inclusion criteria for the study involved being a child age 3-7 whose parent provided consent for participation. The child also needed to provide verbal assent. Children with mental retardation, pervasive developmental disorder, or evidence of current psychotic behavior were excluded. Offending caregivers (in abuse cases as determined by child protective services, child-report, or the appropriate advocacy center) were excluded from the study because their responses could have biased the results; however, non-offending caregivers were able to provide consent and be included in the study. In cases where children took part as a result of receiving services from one of the advocacy centers, offending parents were already excluded as a result of the services provided. In other cases, in the demographic portion of the survey, if caregivers or children indicated that the children's trauma had been abuse of any variety he/she was free to list the abuser; however, they were not obligated due to the possibility of placing the children in danger. If the children disclosed such abuse, the researcher made a report to child protective services as required by law.

3.1.1 Clinical Sites

1. Children's Advocacy Center: When children and their caregivers first came to the Children's Advocacy Center, they participated in a forensic interview and were referred to counseling. A graduate research assistant for the project invited them to participate in the study. The researcher obtained, consent, assent, and completed the measures. Since the assessment occurred prior to the first counseling session, children were assumed to have experienced very limited intervention.

2. The Advocacy Center for Crime Victims and Children: Participants at the Advocacy Center for Crime Victims and Children followed the same procedures as those participants at the Children's Advocacy Center; however, these participants were contacted and interviewed by the primary researcher.

3. Safe Haven of Tarrant County were approached by the children's therapists to determine if they wanted their children to participate in the study. The children's therapist assigned to the children who met criteria for the study explained the purpose of the research to the parents, in this case, all mothers. If the mothers were interested in participating, they were scheduled appointments to meet with the primary researcher. The primary researcher met with the mothers, further explained the study and obtained informed consent and assent. While the mothers completed the parent measures, the primary researcher met with each child individually, again obtained assent, and completed the child measure. Since Safe Haven of Tarrant County is a domestic violence shelter, the intervention with children was very brief and was assumed not to have affected the research, as the children had not experienced a high level of intervention at the point of the research assessment.

4. 4-C Head Start participants were solicited through letters that were sent home in their daily folders explaining the research study. Further, during at least one parent education meeting per semester, the graduate research assistant and the primary research presented information about the study to the caregivers attending the monthly parent education meeting. After caregivers gave consent and children indicated assent, they were provided with the measures. Caregivers were given the opportunity to have the interview with the graduate assistant or primary researcher in their home or at the Head Start Center. The children were given their measure in a private place at the Head Start Center.

5. Overall Agency Agreements: The executive directors of all organizations provided a memorandums of understanding for the duration of the research project to solicit participants, access demographic information, access appropriate records, and utilize the facilities as needed. Caregivers and children at the above agencies were told that their decisions to participate or not participate in the research would not affect the services they receive from the agencies.

3.1.2 Sampling Procedure

As mentioned above, the recruitment procedure varied depending on the clinical site. The researcher had difficulty obtaining a large number of participants for this study. For participants at the Advocacy Center's children and caregivers were approached by counselors during their assessment interview following their forensic evaluation. The study was presented in a way in which participation would be helpful to assess the severity of the children's symptoms. Difficulty with participation at these sites could be considered a function of the trauma in which the family was enduring at that point in time. Families were learning of abuse allegations, experiencing child protective services interventions, and having a myriad of emotions. Participation in a study, regardless of its potential benefit may not have seemed vital at that point in time. Caregivers may have needed to attend to their own issues during these interviews, rather than think of an extra activity for their children.

Children who were sampled from the Safe Haven of Tarrant County locations faced a similar issue. All of these children's caregivers were approached by the children's counselors and asked if they wanted their children to be able to participate in the study. In addition to the caregivers being in a constant state of transition by virtue of being in a domestic violence shelter, many caregivers had difficulty with participating because of the nature of the shelter. Time constraints, consenting one day and moving another, safety issues, and again further trauma issues all potentially affected sample size from this location. Further, this location accepted clients who only spoke Spanish, which prevented some of the residents from participating in the study, as being English speaking was a requirement.

At the 4C's Head Start centers, initially letters inviting participation were sent home in daily folders with children. When this method did not yield a response, the researcher and research assistant began attending monthly parent meetings to discuss the study with the caregivers. Due to having caregivers express concern about the study, its purpose, and child protective services intervention, the primary researcher explained how children perceive things

differently than adults and used the example of how her son reacted to the family cat's death when he was 5. This story built rapport with families and led to several caregivers taking assessment instruments; however, the return rate on the instruments and consents for the children was still low. Due to confidentiality, the researcher and research assistant were unable to do follow up contacts; however, the child/family advocate at head start did attempt at least one phone call. The biggest issue with sample size from the Head Start centers appeared to be a two-fold concern that if the children had trauma issues, child protective services would become involved, and if the child did not have trauma issues, then participation in the study really was not needed, so therefore, not relevant to the child. Further, at two of the Head Start centers, the child/family advocate was bilingual, so Spanish speaking only parents were assigned to those centers. These parents appeared to be interested, but again were unable to participate due to the requirement that children and caregivers needed to be English-speaking. This requirement was necessary not only because neither the researcher nor the research assistant spoke Spanish but also because the instrument had not been translated and validated appropriately in Spanish.

3.2 Experience and Training of Interviewers

To ensure the children's and parents' comfort and well-being, the researcher provided explicit training to the graduate research assistant who was assigned to the project. The graduate research assistant focused on assessing children at 4 C's Head Start and at the Children's Advocacy Center. She was a master's level psychology student who has a bachelor's degree in social work and worked under the direct supervision of the primary researcher. Furthermore, the graduate research assistant completed her master's degree during the course of the research and at the time of its completion possessed licensure as a bachelor level social worker. She also earned dual master's degrees in marriage and family therapy and counseling psychology. The primary researcher possesses a bachelor's degree in

psychology and a master of science degree in social work. She is licensed as a clinical social worker and certified as a trauma specialist in children.

The graduate assistant was specifically chosen because she had completed courses, practicums, and employment in social work with children who had trauma backgrounds. Further training included practice reading the Trauma Assessment for Young Children verbatim to children and rehearsal on age-appropriate children who were not participants in the study. The primary researcher observed the graduate research assistant complete the assessment on five children to ensure that both the primary researcher and the graduate research assistant used the same terminology. For example, the word “tummy” was substituted for “stomach” on all assessments due to the age level of the children. Additionally, the primary researcher or research assistant learned from the caregiver’s demographic assessment if with whom the children lived so that they could use age appropriate terminology, like mommy, rather than caregiver, which the children would not understand. Actual inter-rater reliability scores were not calculated due to the children pointing to the answer themselves, so no rating was necessary on the part of the researcher. All scoring was completed per the instructions discussed in the procedures section. The graduate assistant was also trained thoroughly on the other measures used in the study and completed the institutional review board training for ethical research required by the university.

These trainings and precautions were in place to ensure that if, in the unlikely event, children became upset during the assessment procedures, the individual completing the assessment, could accurately determine that the children were in distress, and either assist the children if appropriate for the agency, or immediately transfer the children to the appropriate person within the agency. In either situation, the children’s participation immediately ended. Further, for the children being assessed at Head Start, a list of community resources was provided to parents whose children became upset or scored in a clinical range on any assessment instrument. Due to the format of the assessment itself and the assessment

environment, the risk of children becoming upset was minimal. However, since the assessment topic was trauma, children who had experienced trauma could potentially experience some distress due to recalling their experiences. Caregivers also had the possibility of experiencing some psychological distress when they considered their children's symptoms, especially if they were previously unaware.

3.3 Assessment Measures

The materials used for the study included several measures. The first measure was a 9 item self-report inventory that assessed trauma symptoms in 3-7 year olds. This measure was entitled Trauma Assessment for Young Children (TAYC), which was developed for this study. The second measure was the Trauma Symptoms Checklist for Young Children (TSCYC). This measure is a 90 item parent report measure that assesses trauma symptoms in young children. The final measure used in this study was the Child Behavior Checklist (CBCL). The Child Behavior Checklist is a 100 item caregiver report item that assesses internalizing and externalizing behaviors and language development for preschool children. The Child Behavior Checklist also comes as a school age version that measures internalizing and externalizing behaviors geared more toward DSM-IV diagnoses by parent report.

3.3.1 The Child Behavior Checklist

The Child Behavior Checklist was developed by Achenbach and Rescorla (2000; 2001) in a preschool and school age form respectively to assess a variety of childhood symptoms. Since the participants ranged from 3-7 years, the pre-school and school versions of the CBCL were used. The CBCL for preschool children is a 100 item Likert measure for children 3-5 years that assesses internalizing and externalizing behaviors in a fashion similar to the school age CBCL, but it also assesses language development. It has a high internal consistency ($\alpha = 0.63 - 0.96$), a high test-retest reliability ($r = 0.57 - 0.92$), and good inter-rater reliability ($r = 0.49 - 0.76$) (Flanagan, 2004). The CBCL for school age children will be used for children ages 6-7 years and has both a parent report and a child report measure; however, to maintain

consistency with the preschool version, only the parent report measure used. The CBCL for school age children is a Likert measure that assesses internalizing and externalizing behaviors on a variety of subscales including scales oriented toward assessing DSM-IV-TR disorders, aggression, anxiety/depression, social problems, inattention, somatic complaints, thought problems, rule-breaking, and withdrawal. It has high test-retest reliability ($r = 0.79 - 0.90$) good inter-rater reliability ($r = 0.49 - 0.76$) and high internal consistency ($\alpha = 0.55 - 0.97$). It was normed consecutively on several samples of children from diverse ethnic and socioeconomic backgrounds; therefore, it is acceptable to use with diverse populations of children. Both measures demonstrate good construct and criterion validity ($r = .38 - .87$) (Flanagan, 2004).

3.3.2 The Trauma Symptom Checklist for Young Children

The Trauma Symptom Checklist for Young Children was developed by Briere (2001) and is a 90 item parent-report measure that assesses for trauma symptoms on several subscales. These scales include anxiety, depression, aggression, traumatic intrusion, traumatic avoidance, traumatic arousal, traumatic total, dissociation, and sexual concerns. There are also two validity scales within the instrument. The scores are broken into ages groups for 3-4 year olds, 5-9 year olds, and 10-12 year olds. The measure was normed on approximately 220 caregivers whose children were predominantly female (62%) and nonwhite (62%). The mean age of the children was approximately 7 years. The test-retest reliability and internal consistency levels found for the TSCYC are based on ranges found in three samples from studies commonly cited in the further validation of the instrument (Mackler, 2004). The response level scales demonstrated high internal consistency ($\alpha = 0.73-0.86$); whereas, the atypical response had a wide range of internal consistency ($\alpha = 0.36-0.93$) which depended upon the child's age (older children had more varied responses); the clinical scales demonstrated the highest levels of internal consistency ($\alpha = 0.78- 0.93$). Test retest reliability was reasonably high ($r = 0.68- 0.96$) (Mackler, 2004).

3.3.3 The Trauma Assessment for Young Children

The Trauma Assessment for Young Children is a 10 item measure that includes 1 open-ended item and 9 closed-ended items designed to assess trauma symptoms by self-report in children ages 3 to 7. A nearly identical version for parents was also developed. As discussed previously, numerous theories attempt to explain complex trauma, developmental trauma, post-traumatic stress disorder, and overall trauma symptoms in children. Creating an assessment tool becomes a monumental task to assess trauma symptoms in young children and incorporate aspects from each theory, such as complex trauma theory, developmental trauma theory, DSM-IV-TR diagnostic criteria, attachment theory, and child psychosocial and cognitive developmental theories, and utilize knowledge based on clinical practice. Researchers have hypothesized the quintessential symptoms of trauma in young children, based on theoretical literature.

3.3.3.1 Creation of the measure

First, to devise this measure, common childhood symptoms related to traumatic experiences were reviewed in the literature. Several themes emerged were included in this measure: the presence or an increase in (a) cognitive dysfunction that presents as difficulties with academic functioning, (b) behavioral dysfunction that is displayed as aggression or regressed behavior, (c) dissociative dysfunction displayed as auditory and/or visual flashbacks, (d) somatic dysfunction that is presented as frightening dreams with or without recognizable trauma-related content or somatic complaints, (e) interpersonal dysfunction presented as anxious/clingy behavior or attachment difficulties, (f) affective dysfunction that can present with depression and/or rage, (g) self-concept dysfunction that can present with a myriad of issues but is usually not found in preschool children because of their developmental level (APA, 2000; Cook, et. al., 2005; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005).

In addition, assessing these thematic issues in young children required that their cognitive and social development was considered. Consequently, the measure took into consideration that children at this age typically engage in preoperational thought and very few have emerged into concrete operational thought (Child Development Institute, 2007). Equally important to consider was the need for young children to communicate through play (Landreth, 2002). As a result, a measure must incorporate graphics that are pleasing and friendly to children and use some type of play devices, such as figurines, stuffed animals, or puppets. When a measure provides children with the tools needed to communicate in their natural modality, their social development is enhanced by helping children work toward feelings of higher self-esteem in a task related to their psychosocial development, whether the developmental stage is initiative versus guilt or industry versus inferiority (Erikson, 1950; Erikson, 1968; Hamachek, 1985). While the measure itself does not necessarily increase self-esteem, the use of a play modality provides a non-threatening, developmentally appropriate means for children to be assessed.

Further, when an adult, especially one who may not be well-known to a child, presents material in a manner that is at the child's level, the measure and delivery tools must provide the child with a sense of safety and security. For children who may have attachment issues, these tools must provide some element of trust-building (Ogawa, 2004; Streeck-Fischer & Van der Kolk, 2000). Essentially toys and the measure must appeal to the developmental nature of the child both cognitively and socially and provide the forum for communication which is natural in the child's world (Child Development Institute, 2007; Hamachek, 1985; Landreth, 2002).

3.3.3.2 Assessment Measure

The measure is a 10 question inventory, with one open-ended question in which children are asked to describe the bad, sad, scary thing that happened to them. The remaining 9 items are closed-ended Likert-scale items. Children use paw prints to identify how frequently they experience different trauma symptoms that were cited in the literature. The size of the paw

print indicates the frequency of the symptom. Responses ranged from “Never or none of the time,” “A little bit,” “A lot” to “Always or all of the time.” The parent measure is identical to the child measure except that parents respond with words rather than paw prints. Parents are instructed to respond in the manner in which they believe their children will respond since some of the items are internal, and parents would be unable to observe the experiences. The questions were developed as follows:

3.3.3.2.1 Question 1

“Since the bad, sad, scary thing happened, Scampi doesn’t like to go to sleep because he has bad, scary dreams. How much do you have bad, scary dreams? Point to the paw print that shows how much.”

This question related to the behavioral dysfunction of disturbed sleep, as well as, possible somatic dysfunction since disturbed sleep can lead to medical problems, and the DSM-IV-TR criteria for PTSD of recurrent distressing dreams and sleep disturbance (APA, 2000; Cook, et. al., 2005; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Preschool children and young school age children have been noted to experience sleep disturbances and nightmares without recognizable content related to the trauma (Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001). Scheeringa, et. al (2003) and Scheeringa’s and Zeenah’s (2008) PTSD criteria for preschoolers that involve increased nightmares and sleep disturbance which have been noted by this question. (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.2 Question 2

“Since the bad, sad, scary thing happened, Scampi has had pictures of what happened inside his head. How much do you have pictures of the bad, sad, scary thing come into your head? Point to the paw print that shows how much.”

This question related to the dissociative dysfunction domain put forth in developmental and complex trauma, as well as, to the DSM-IV-TR criteria for PTSD of intrusive recollections,

intrusive memories, or visual flashbacks. The question is an age appropriate way of asking the children if they have experienced visual flashbacks and/or intrusive memories both of which are not in the realm of conscious reality (APA, 2000; Cook, et. al., 2005; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Young children exhibit beliefs in such images or recollections as having special or magical qualities or powers (Steele & Raider, 2001). Assessing flashbacks also addressed dissociative symptoms posited by developmental trauma disorder and complex trauma theory, and flashbacks are specifically addressed in the symptomatology of developmental trauma disorder (Cook, et. al., 2005; Van der Kolk, 2005). This item related to Scheeringa, et. al.'s (2003) and Dehon's and Scheeringa's criteria for PTSD for preschoolers for cluster B.

3.3.3.2.3 Question 3

"Since the bad, sad, scary thing happened, Scampi feels scared most of the time. Since the bad, sad, scary thing happened, how much do you feel scared? Point to the paw print that shows how much."

This question assessed affective dysfunction posited by developmental and complex trauma, as well as, DSM-IV-TR criteria for PTSD related to the intense fear response (APA, 2000; Cook, et. al., 2005; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Fear responses, whether vague or specific are common in children who have experienced a traumatic event. Generalized fear and nervousness appears to be pervasive in young children who have experienced a trauma (Alkhatib, et. al, 2007; Bender & Sims, 2007; Horton & Cruise, 1997; Kenny, 2000; Steele & Raider, 2001; Wikstrom, 2005). Although specific feelings of fear are not addressed in the overlap between complex trauma and developmental trauma disorder, fear is specifically identified as a problem that corresponds with developmental trauma disorder due to the issues presented with trauma in young children. With developmental trauma disorder, fears

are more likely to occur because of the betrayal, abuse, and inconsistency children experience with interpersonal trauma (Van der Kolk, 2005). This item also considers the proposed cluster E alternative criteria for new onset fears for PTSD for preschoolers (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.4 Question 4

“Before the bad, sad, scary thing happened, Scampi used to like to eat and felt good. After the bad, sad, scary thing happened, Scampi’s stomach hurt a lot of the time. Point to the paw print that shows how much of the time your stomach hurts since the bad, sad, scary thing happened.”

This question again addressed somatic dysfunction. Specifically, young children often exhibit loss of appetite or bowel and bladder problems, which in their world is translated into “my stomach hurts” (Steele & Raider, 2001). General somatic complaints and multiple medical problems have been noted in the area of somatic dysfunction in the developmental trauma disorder and complex trauma literature by Cook, et. al. (2005), Streeck-Fisher and Van der Kolk (2000) and Van der Kolk (2005). This item addressed the cluster B for alternative criteria for PTSD for preschoolers (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.5 Question 5

“Before the bad, sad, scary thing happened, Scampi used to like to play and have fun with his friends. Since the bad, sad, scary thing happened, Scampi doesn’t feel like playing as much. Point to the paw print that shows how much of the time you feel like playing.”

This item was reverse scored in order to provide verification that the child is attentive and truthful. This question addresses the interpersonal dysfunction domain in the area of social isolation (Cook, et. al., 2005; Van der Kolk, 2005). It also addresses DSM-IV-TR criteria for PTSD related to feeling detached or estranged from others and losing interest in significant activities (APA, 2000). This type of behavior has been noted by Steele and Raider in the form of clinging to caregivers, which results in social withdrawal and isolation from peers (2001). It is

difficult to differentiate if the clinginess is a result of a problematic attachment caused by the traumatic experience or a result of discomfort due to stressful peer relations or feeling detached from peers and closer to caregivers. Corcoran (2000), Horton and Cruise (1997), and St. Thomas and Johnson (2002) have noted relationship problems in children who have experienced varying types of trauma. Further, decreased social skills, of which play is essential in young children, have been noted in traumatized children (Corcoran, 2000; Kenny, 2000; Lieberman, et. al., 2005; St. Thomas & Johnson, 2002). Finally, both complex trauma and developmental trauma disorder have noted interpersonal dysfunction to be one of the key domains in traumatized children with social isolation to be problematic (Cook, et. al., 2005; Van der Kolk, 2005). This item addressed cluster C, which proposes constriction of play and social withdrawal for the alternative criteria for PTSD for preschoolers by looking at the reverse – i.e. children who score low on this item are the children experiencing the trauma symptoms (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.6 Question 6

“Since the bad, sad, scary thing happened, Scampi hears noises that remind him of what happened. Point to the paw print that shows how much of the time you hear noises that remind you of the bad, sad, scary thing.”

This question addressed the presence of auditory flashbacks, which relate to the dissociative dysfunction domain put forth in developmental and complex trauma, and to the DSM-IV-TR criteria for PTSD of auditory flashbacks or intrusive recollections that are not part of present consciousness (APA, 2000; Cook, et. al., 2005; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Young children exhibit belief in such images or recollections having special or magical qualities or powers (Steele & Raider, 2001). They also exhibit memory impairment and changes as a result of trauma (Steele and Raider, 2001). This question addressed one aspect (responses to noises) of altered states of consciousness and one possible aspect of

dissociation posited by developmental trauma disorder and complex trauma theory, and may be associated with flashbacks that are specifically addressed in the symptomatology of developmental trauma disorder (Cook, et. al., 2005; Van der Kolk, 2005). This item was similar to question 2 and addressed the alternative criteria for cluster B for the alternative criteria for PTSD in preschool children (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003; Scheeringa & Zeanah, 2001).

3.3.3.2.7 Question 7

“Before the bad, sad, scary thing happened, Scampi felt safe when he was away from the people who take care of him. Since the bad, sad, scary thing happened, Scampi wants to always be with the people who take care of him. Point to the paw print that shows how much you want to be with the people who take care of you.”

This item was designed to assess interpersonal and behavioral dysfunction in the realms of attachment difficulties and a type of regressed behavior (Cook, et. al., 2005; Steele & Raider, 2001; Van der Kolk, 2005). Although the researcher anticipated that young children want to be around their caretakers, actual clinginess and an increase in this desire since a traumatic experience deviates from the developmental experience of developing initiative rather than guilt or developing industry rather than inferiority at these stages of their lives. Children who experience a variety of traumatic events demonstrate an increase in problematic attachment experiences, relationship problems, and clingy behavior (Corcoran, 2000; Horton & Cruise, 1997; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; St. Thomas & Johnson, 2002; Van der Kolk, 2005). Clingy, regressed behavior can be seen directly or it may also be seen through expressed fears of abandonment (Carmichael & Lane, 1997; Kenny, 2000). According to the alternative criteria for PTSD in children, this item has the potential to address several areas. It targets cluster C with the loss of developmental skills, restriction of play and social withdrawal; it assesses cluster D if the child is clingy with associated tantrums or

irritability when separated, and finally, it targets the newly proposed cluster E with new onset separation anxiety (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.8 Question 8

“Before the bad, sad, scary thing happened, Scampi did a good job at school/day care. Since the bad, sad, scary thing happened, Scampi is not doing a very good job at school/day care. Point to the paw print that shows what a good job you are doing at school/day care.”

This item is worded to require children to think in an opposite manner when they answer the question. While children may not think cognitively about doing poorly in school, the researcher was concerned about asking a negatively worded question, and negative wording on the children’s self-esteem. Although the item is reverse scored for validity purposes, it is also reverse scored due to the children’s self-esteem. Asking children to point to a paw print that shows what a bad job they do at school seems to be harmful and would violate ethical standards. This item again serves to assess the area of cognitive dysfunction where traumatized children experience learning and attention difficulties. (Cook, et. al., 2005; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Other authors have noted decreases in academic functioning and skills and decreased attention span as well (Alkhatib, et. al., 2007; Corcoran, 2000; Horton & Cruise, 1997; Shackman, et. al., 2007). According to alternative PTSD criteria, this item potentially addressed clusters C and D of the alternative criteria for PTSD for preschool children. It targets cluster C with the proposed loss of developmental skills, as children may develop academic difficulty if they had previously accomplished and succeeded in tasks and then lose the ability to perform those tasks (i.e. younger children may note that they had previously been able to color well and no longer can; whereas, older children may have done well with writing and are now getting lower handwriting grades). Although children are not asked to provide such specific examples, children often equate getting lower marks on papers to doing a bad job. It assesses cluster D through

meeting the criteria for decreased concentration, which in turn creates academic difficulty and decreases in functioning (Dehon & Scheeringa, 2006).

3.3.3.2.9 Question 9

“Before the bad, sad, scary thing happened, Scampi got along really well with other cats. Since the bad, sad, scary thing happened, Scampi has been having a hard time getting along with other cats. Sometimes he yells at them or fights with them. Point to the paw print that shows how much you yell or fight with other people.”

This item assessed children’s self-report of yelling or fighting. This behavior may demonstrate children’s struggles with anger, aggression, and perhaps interpersonal problems in several areas. It assesses the affective dysfunction domain of complex and developmental trauma by addressing anger and aggression. The question addressed the interpersonal difficulty to which yelling and fighting can lead (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). This question also addressed DSM-IV-TR criteria for PTSD related to irritability and outbursts of anger (APA, 2000). This question potentially behaviorally assessed the alternative criteria for PTSD in preschool children in both cluster D through irritability and lability, and newly proposed cluster E with new onset aggression (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.2.10 Question 10

“Before the bad, sad, scary thing happened, Scampi acted like a 5 year old cat. Since the bad, sad, scary thing happened, Scampi has been acting like he is a younger, smaller cat. He forgets how to use the litter box and started to suck his paws again. Point to the paw print that shows how many times you do things that you did when you were younger and smaller since the bad, sad, scary thing happened (wet the bed, suck thumb).” If children are confused the parenthesis are available as prompting suggestions; however, the researcher did not want to limit the question to a direct one given that children may regress in ways other than wetting

the bed or sucking thumbs, and children may respond with these examples or with one of their own.

This question assessed the areas of behavior dysfunction and self-concept dysfunction for developmental and complex trauma. Although regressed behavior falls in the domain of behavioral dysfunction, having an unstable sense of self falls into the self-concept dysfunction domain and losing previously possessed tasks can be seen as having an unstable sense of self in the world of a young child (Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Regressive symptoms and behaviors have also been noted in children who have experienced diverse traumas (Alkhatib, et. al., 2007; Bender & Sims, 2007; Haen & Brannen, 2002; Steele & Raider, 2001). Further, Scheeringa, et. al. (2003) proposed that regression be added as alternative criteria to the DSM-IV-TR for PTSD for preschool children. This criteria falls under cluster C with the loss of a previously acquired developmental skill (Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003).

3.3.3.3 Administration of the Test Measure

Children were allowed to hold a colorful stuffed cat, while a brief story was read about a cat named Scampi who had a bad, sad, scary thing happen to him/her (the cat's gender was dependent upon the child's gender). The researcher then explained to the child how Scampi used his/her paw prints to let others' know how upset he/she is about something. The paw prints were graphic depictions of the Likert-type choices. Consequently, a very tiny paw print corresponded to "Never or none of the time," and the child was instructed that if that was the accurate response, he/she should point to that tiny paw print. A small paw print meant "A little bit." A large paw print meant "A lot," and a huge paw print meant "Always or all of the time." (See Appendix A for the original version of the TAYC)

3.3.3.4 Initial Testing

To ascertain the extent of trauma symptoms experienced by young children, the possible extent of these symptoms was studied in children who have not experienced overt

traumas. Consequently, children who had not experienced trauma are expected to report experiencing symptoms “none” or “a little of the time.” The pre-test participants were eight children solicited from three area schools. These children ranged in age from 3-7 with a mean age of 5.25. Five boys and three girls participated in the study. The group consisted of 7 white children and 1 African American child. According to caregiver reports, none of the children possessed a DSM-IV-TR diagnosis, and no caregiver reported an overt experience of trauma, with the exception of one grief experience (father had died slightly over a year ago). For the three local schools the principals or headmasters/mistresses provided letters of agreement/understanding to the primary researcher. The researcher sent out 120 letters; however, only 7 responses were returned. A second invitation was sent to the parents in the children’s daily folders, but only one additional participant was obtained. The parents provided informed consent. The “test run” of the instrument was explained to the children both with and without parents being present to ensure child assent was obtained without pressure. Children were then administered the measure individually in a private room provided by their school, following the same procedures delineated in the “test procedures” section. Parents provided demographic information and completed the measure at home in accordance with how they believed their child would respond. Parent-report measures and child-report items would be correlated to determine if consistency or discrepancy exists in the reports, as demonstrated in the literature.

3.3.3.5 Results for the Initial Testing

Results for the initial testing of the measure were computed using SPSS for Graduate Students Version 16.0. Because of the extremely small sample size, these results must be viewed with caution. Initial analyses were conducted merely to find the modal responses on each item of the Trauma Assessment for Young Children for both the caregivers and the children. Responses were coded on a 1-4 Likert scale with 1 being the response for never or none of the time, 2 being the response for a little of the time, 3 being the response for a lot of

the time, and 4 being the response for all of the time. Table 3.1 presents the frequencies and modal responses of the children, and Table 3.2 presents the frequencies and modal responses of the caregivers.

Table 3.1 Frequencies & Modes for Initial Child-Report N = 8

Item Number	Never = 1	A Little = 2	A Lot = 3	Always = 4
1: Scary Dreams	2	4*	2	0
2: Reminder Pictures	3	4*	1	0
3: Feeling Scared	3	4*	1	0
4: Stomach Hurts	0	4*	4*	0
5: Playing Well	0	0	4*	4*
6: Reminder Noises	5*	3	0	0
7: Wants Caregiver	0	0	4*	4*
8: Good Job at School	0	0	5*	3
9: Fighting	2	5*	1	0
10: Regression	5*	3	0	0

*Modal Value

Table 3.2 Frequencies & Modes for Initial Caregiver-Report N = 8

Item Number	Never = 1	A Little = 2	A Lot = 3	Always = 4
1: Scary Dreams	2	5*	1	0
2:Reminder Pictures	6*	2	0	0
3: Feeling Scared	5*	3	0	0
4: Stomach Hurts	3	4*	1	0
5: Playing Well	1	0	4*	3
6: Reminder Noises	7*	1	0	0
7: Wants Caregiver	0	0	5*	3
8: Good Job at School	0	0	3	5*
9: Fighting	5*	3	0	0
10: Regression	7*	0	1	0

*Modal Value

To calculate a full scale score for the measure, the total for the following items were summed (items 1, 2, 3, 4, 6, 7, 9, and 10). Items 5 and 8 were reversed scored so that “never” was scored as a 4, “a little of the time” was scored as a 3, “a lot of the time” was scored as a 2, and “all of the time” was scored as a 1. Once these items were reversed scored, they were

summed and added to the sum total of the initially scored items. This total score then was considered the full-scale score for the Trauma Assessment for Young Children.

Based on the initial testing of the instrument, the validity was questioned for question 7 - "Before the bad, sad, scary thing happened, Scampi felt safe when he was away from the people who take care of him. Since the bad, sad, scary thing happened, Scampi wants to always be with the people who take care of him. Point to the paw print that shows how much you want to be with the people who take care of you." Although the literature reported that traumatized children experience a high level of clinginess that is not consistent with their developmental level was related to regressed behavior, relationship and attachment problems, and general overt problematic clinginess to the primary caregiver, (Carmichael & Lane, 1997, Cook, et. al., 2005; Corcoran, 2000; Horton & Cruise, 1997; Kenny, 2000; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; St. Thomas & Johnson, 2002; Van der Kolk, 2005) since the modal response of non-traumatized children on this item was evenly split between "a lot of the time" and "all of the time" and the modal response for parents was "a lot of the time," the researcher determined that it may indeed be normative for children within the 3-7 age group to feel close to their parents, even without having a traumatic experience. Further, since the developmental level of the measure is for children in the stages of initiative versus guilt and early industry versus inferiority, remaining close to caregivers is still a common experience (Erikson, 1950; Hamachek, 1985). Additional concerns arose with this item based on evidence that securely attached children in preschool function better. Estrada, Arsenio, Hess, & Holloway, 1987) found that children who had positive play interactions with their mother during their preschool years demonstrated better mental ability, school readiness, school achievement, and a higher IQ, than those children who had less productive play interactions with their mothers. This finding would suggest that children without traumatic occurrences also prefer being with their caregivers, and this preference can lead to positive future results. Further, attachment literature indicates that children with secure attachments in preschool and early

school ears demonstrate better peer communications, higher levels of cognitive engagement, and higher levels of motivation mastery than children with avoidant or ambivalent types of attachment (Moss & St. Laurent, 2001). Unfortunately, children with ambivalent attachment often indicate that they want to be with their caregivers, as well, making this item confusing to determine if children have or have not experienced trauma; while children with secure attachment may feel comfortable being away from their caregivers and vice versa. Finally, some children who initially had secure attachments were later found to have disorganized attachments, the type of attachment most frequently associated with trauma. These children most frequently experienced a loss or some type of parental hospitalization, which led to less maternal interaction and a subsequent change in their attachment pattern; thereby indicating that their initial healthy preference was to spend time with their maternal caregiver (Moss, Cyr, Bureau, Tarabusy, & Dubois-Comtois, 2005). Consequently in an effort to preserve the integrity of the measure to only assess trauma symptoms, this item was eliminated from the current measure.

3.3.4 Current Measure

The current TAYC, as mentioned above is a 10 item measure, consisting of 1 open-ended question and 9 closed-ended, Likert scale questions. The 9 items on the current measure that are Likert scale, consist of questions 1, 2, 3, 4, 5, 6, 8, 9, and 10 discussed above. The child-version of the measure utilizes a stuffed cat to tell the children that it had a bad, sad, scary thing happen to it. The cat then explains how it uses its paw prints to let people know how upset it is or how often it experiences certain symptoms and asks the children to do the same. The parent version consists of identical questions but rather than paw prints, parents merely read the questions and circle responses that are “none of the time,” “a little of the time,” “a lot of the time,” or “all of the time.” Parents are also asked to write down the bad, sad, scary thing that happened to their child (See Appendix B for the current version of the TAYC & Parent version of the TAYC).

3.4 Test Procedures

The researcher and research assistant followed the same protocol. To simplify procedural methods, the researcher will be referred to from this point forward. The actual testing procedure involved caregivers completing the Trauma Symptom Checklist for Young Children (TSCYC), the Child Behavior Checklist (CBCL), either the preschool version or the school age version depending on the child age), and the Trauma Assessment for Young Children (TAYC). Caregivers were verbally given instructions to complete the TSCYC and the CBCL. The instructions are also provided on the response sheets of these testing booklets. Caregivers were instructed to answer how they believed their children would answer on the TAYC. Caregivers were provided with the option of completing these measures while their children completed the TAYC; however, since the caregiver measures take more time to complete, caregivers were given the option of returning the measures the following week. The researcher explained the measures' instructions, asked for questions, waited a few minutes while the caregiver looked through the measures, again checked for understanding, and provided a phone number to contact if caregiver was completing measures and returning them. Further, the caregivers also completed a demographic information sheet that provided information on family household, family income, previous traumatic experiences involving their children, DSM-IV-TR diagnoses their child possesses, and age, gender, and ethnicity of their children.

Children only completed the TAYC. The researcher used a stuffed toy cat to talk to the children. The stuffed toy cat, Scampi, had experienced a trauma (bad, sad, scary thing) and had a variety of symptoms that he/she told people about using paw prints. Rather than the researcher talking directly to the children, the researcher used the stuffed toy cat. The stuffed toy cat was used to simulate play with the children and enable them to communicate more easily. The researcher or research assistant read the questions to the children. The gender of the child determined if Scampi was male or female to match the child's experience. The researcher used, Scampi, the stuffed toy cat to tell the child that Scampi had a bad, sad, scary

thing happen to him/her (the cat). The researcher used Scampi to ask the child to tell Scampi about the bad, sad, scary thing that happened to him/her (the child). The term “bad, sad, scary thing” was used to refer to traumatic experience in a language children could understand. The wording also allowed the children to choose their own experience, so children could interpret it however they chose, which afforded choices, such as severe acts of abuse or typical childhood events like falling off a swing. After the child told about the bad, sad, scary thing that happened to him/her, the researcher explained that Scampi used paw prints to explain how much certain things (symptoms) bothered him/her or how often they happened after the bad, sad, scary thing happened. To ensure that children understood the size differences among the paws, the researcher had the children point to the paws that meant the different amounts. The researcher had younger children also show the size difference with their fingers (tiniest paw print = “none of the time,” next smallest paw print = “a little of the time,” big paw print = “a lot of the time,” super giant paw print = “all of the time”). The researcher then explained that Scampi was going to tell the child about some of those things (symptoms) and wanted the child to use paw prints to tell him/her about how much they happened. The children responded to the questions by choosing the paw to represent how often or how much they experienced a certain symptom. The researcher read the question to the child and asked the child to point to the paw print that indicates how often the child experienced that symptom. The researcher then recorded, on a scale of one to four, the child’s response. The researcher was not independently rating the child, rather, recording the child’s self-report rating. For example, if the child pointed to the smallest paw print, which indicates “None of the Time,” the researcher recorded a “1.” If the child pointed to the second smallest paw print, which indicates “A Little of the Time,” the researcher recorded a “2.” If the child pointed to the second largest paw print, which indicates “A Lot of the Time,” the researcher recorded a “3.” If the child pointed to the largest paw print, which indicates “All of the Time,” the researcher recorded a “4.” Children ages 2-7 are in Piaget’s preoperational stage of cognitive development. As a result, they are developing and

mastering skills of classification and serialization; consequently, this type of format of questioning is within their scope of abilities (CDI, 2000-2010).

3.5 Data Analysis

The data analysis focused primarily on reliability and validity statistics for the TAYC. For informational purposes and potentially future research indications, demographic variables, such as family income level, siblings, adults in the house, type of trauma, gender, ethnicity, and DSM-IV-TR diagnosis were gathered. Inferential statistics were conducted to determine if significant differences existed in this sample in gender or ethnicity on the assessment instruments. Based on the responses given, children were placed in a “no trauma or control” group or an “interpersonal trauma” group, which consisted of responses involving witnessing domestic violence, experiencing some type of abuse experience, a combination of the two, or witnessing domestic violence and a combined non-interpersonal trauma, such as multiple moves or illness, or abuse combined with a non-interpersonal trauma. Data was analyzed on the sample as a whole, and then based on the group in which the child was assigned. Since the CBCL separates testing between 3-5 year olds and 6-7 year olds due to developmental level, and since it is likely that school demands change during these years, testing was going to occur to determine if there was a significant difference in age groups on the TAYC; however, this testing could not occur due to there being a significant difference in the number of respondents in the different age groups (n = 4 for ages 6-7; n = 43 for ages 3-5).

Reliability of the measure was based on test-retest reliability and internal consistency. The statistics for internal consistency were analyzed on the full-scale TAYC scores for caregiver-report and child report. Because of developmental concerns about children having inherent difficulties with stabilities in cognitive and psychosocial functioning at these ages and due to the use of parent-report measures to establish validity, more emphasis will be placed on internal consistency based on the caregiver-report measure (CDI, 2007; Church, 2006; Ginsburg, 1992; Hamachek, 1985; Prambling, 2006). The decision to weigh the caregiver-

report measures more heavily was also based on the need to have measures with which to correlate the TAYC. Similar child-report measures with which to correlate the TAYC are not available for children in this age group.

Test-retest reliability is defined as the stability of a measure over time (Rubin & Babbie, 2011). To assess the test-retest reliability, the measure was given twice to children at the Head Start Centers - the initial interview and again 1 to 2 weeks later. Children at Head Start were chosen for establishing test-retest reliability due to the stability of their interactions with the center and consequently were given their measure 1-2 weeks later, again in a private place at the center. The children at the Head Start Centers were chosen because counseling theoretically would not have affected their responses because in theory these children are a non-clinical sample. The time frame of 1-2 weeks was selected because a review of the literature revealed no true indication for a recommended time period between assessments. However, when assessing children on issues that could be perceived as traumatic such as psychiatric conditions, respiratory problems, cerebral palsy, balancing issues, and actual PTSD, the literature suggested two weeks as a typical re-test time span (Epstein, Harniss, Pearson, & Ryser, 1999; Geldhof, Cardon, De Bourdeaudjuj, Danneels, Coorevits, Vanderstraeten, et. al., 2006; Harada, Saitoh, Iida, Sakuma, Iwasaka, Imai, et. al., 2004; Kuntsi, Andreou, Ma, Borger, Van der Meere, 2005; Perez & Ascaso, 1998; Raat, Landgraf, Oostenbrink, Moll, & Essink-Bot, 2007; Saigh, Yasik, Oberfield, Green, Halainandaris, Rubenstein, et. al., 2000; Wang, Liao, & Hsieh, 2006; Woodward, Santa-Barbara, & Roberts, 1975).

According to Rubin and Babbie (2011), criterion validity is a form of validity that is established when a "measure relates to some external criterion (p. 619)." As a self-report measure, the TAYC assessed if a child has been traumatized through the child's verbalization of the "bad, sad, scary thing" that happened to him/her. Further, the demographic information provided by caregivers provided categorical information on the type of trauma children had suffered. The type of criterion validity that the TAYC attempted to establish is known groups

validity. First and foremost, the researcher hoped that the TAYC would effectively differentiate between traumatized and non-traumatized children. Therefore, data analysis was conducted to determine if such differentiation occurred.

The final types of validity to be established about the TAYC are convergent and discriminant validity, both types of construct validity. Convergent validity is found when a measure correlates with another measure to which it is theoretically similar (Rubin & Babbie, 2011). For the purposes of this study, the Trauma Symptom Checklist for Young Children (TSCYC, Briere, 2001) was selected to establish convergent validity because it is another measure of trauma symptoms indicative of PTSD in children of the same age. If the TAYC has good convergent validity, the measure will demonstrate a high correlation with the TSCYC PTSD subscales, which include the post-traumatic symptom – intrusiveness subscale (PTSI), the post-traumatic symptom – avoidance subscale (PTSAV), the post-traumatic symptom – arousal subscale (PTSAR), and the post-traumatic stress disorder subscale (PTSD), which totals the other three subscales.

Conversely, Rubin and Babbie (2011) defined discriminant validity as “the degree to which scores on an instrument correspond more highly to measures of the same construct than they do to scores on measures of other constructs” (p. 620). The externalizing scale of the Child Behavior Checklist (CBCL) was chosen to establish discriminant validity (Achenbach, 2000; 2001). The externalizing scale of the CBCL has been used to discriminate between trauma or PTSD symptoms and symptoms of behavioral disorders such as oppositional defiant disorder, conduct disorder, attention deficit/hyperactivity disorder, and other impulse control disorders or behavioral symptoms (Dehon & Scheeringa, 2006). Consequently, if the TAYC demonstrates significant positive correlation with the TSCYC and negative correlation with the externalizing scale of the CBCL, then both convergent and discriminant validity are established. The externalizing subscales were analyzed to demonstrate low correlations between the TAYC and

the attention subscale, the aggression subscale, and the total externalizing subscale, which totals the other two subscales of externalizing problems in the CBCL.

Due to the importance of determining if correlation and consistency exists between caregiver-report and child-report measures and the discrepancies that have been reported in the literature on caregiver-reports of children's symptoms, especially internalizing symptoms, the TAYC was analyzed to determine how much correlation existed between the total caregiver-report measure and the total child-report measure. Additionally, item-by-item correlation between caregiver-report and child-report was also conducted to determine if certain items are more consistent between caregivers and children.

To ensure that appropriate sample size was used, a power analysis was conducted. While the alpha level is typically set at $p \leq 0.05$, power levels are reported for both the $p \leq 0.05$ and $p \leq 0.01$ levels. For the correlation analyses to determine the test-retest reliability, convergent and discriminant validity, as well as, the correlation between the caregiver-report measure and the child-report measure, to have 80% power at the $p \leq 0.05$ level, a sample size of 35 is needed; while at the $p \leq 0.01$ level, a sample size of 54 is needed (Machin, Campbell, Fayers, & Pinol, 1997). To have 90% power for correlations at the $p \leq 0.05$ level, a sample size of 46 is needed; while at the $p \leq 0.01$ level, a sample size of 69 is needed (Machin, et. al., 1997). For a comparison of means to conduct known groups validity, at the $p \leq 0.05$ level, 143 participants are needed for 80% power, and 191 participants are needed for 90% power (Machin, et. al., 1997). Therefore, for this study, power is acceptable for the correlations; however, it is not acceptable in tests to compare means, which increases the chances of making a type II error.

Initially, the researcher had proposed to conduct exploratory factor analysis. For exploratory factor analysis, sample size is an issue. Varying opinions have been cited regarding sample size; however, a ratio of participants to items is frequently determined to be needed to find the appropriate sample size. A robust ratio of participants to variable items is

10:1 (Cohen & Cohen, 1983; Nunnally, 1978). For the purposes of this research, the researcher determined that a 10:1 ratio by having a minimum of 90 participants was needed. Since slightly more than half of the minimum number of participants were obtained, exploratory factor analysis for these purposes is inadequate and was not conducted based on sample size.

Another aspect of exploratory factor analysis is the determination of how many items to include on the measurement instrument based on the number of theorized factors. Thurstone recommended three variables per factor to be measured when conducting exploratory factor analysis (Kim & Mueller, 1978). Further, when conducting exploratory factor analysis, a small number of items with high face validity are recommended (Kim & Mueller, 1978). Since Scheeringa, et. al.'s (2003) alternative PTSD criteria for preschoolers have been empirically tested and covered a broad range of symptoms in young children, this model was chosen to theorize factors along the lines of the symptoms that fall into Clusters B, C, and D to determine the number of items needed for the measure. These three clusters were chosen since criterion for cluster A was recommended to be eliminated for young children or to be accepted based on the idea that adults do not recognize experiences of objective terror in preschool age children, so the criteria is too subjective (Dehon & Scheeringa, 2006; Scheeringa et. al., 2003). Further, the open ended question in the beginning of the measure asking children to describe the bad, sad, scary thing that happened to them provides children with an opportunity to describe their traumatic experience, thus giving the cluster A symptom a voice. Scheeringa, et. al. (2003) then looked at reducing the number of criteria necessary to meet the threshold for a diagnosis of PTSD in preschool children for symptoms in clusters B, C, and D (Dehon & Scheeringa, 2006). If clusters B, C, and D are each considered to be factors, respectively, and each question on the TAYC is considered to be a variable, then due to the overlap that some of the questions possess, it was possible to consider that each factor had four variables/items that potentially assessed each cluster. While some of these items potentially assess two clusters, exploratory factor analysis will determine with which factor the item is more closely aligned. For

example, are bad, scary dreams more closely aligned with the nightmare symptom and other cluster B symptoms of re-experiencing or with sleep disturbance and other cluster D symptoms of increased arousal (Scheeringa, et. al., 2003). One of the difficulties with this logic, however, remained the small number of participants in the study combined with the small sample size.

Since the number of participants in the study was 47, and debate ensues in the literature as to the number of items that are appropriate on a measure for factor analysis to be conducted, exploratory factor analysis was not conducted for this study. This decision was based largely on sample size, as the requisite number of participants to have a robust sample for valid factor analysis would be 90.

CHAPTER 4

RESULTS

The purpose of the present study is to validate the Trauma Assessment for Young Children (TAYC). Several reliability statistics, including test-retest reliability and internal consistency, and validity statistics, including known groups validity, convergent validity, and discriminant validity, assessed the measure. Descriptive analyses were also conducted on demographic variables about the participants. Inferential statistics were conducted to determine if significant differences existed on the measures the participants completed based on gender and ethnicity. Finally, correlation analyses were conducted to determine the extent of agreement between the child-report measure and caregiver-report measure..

4.1 Participants

Forty-seven children's caregivers consented to participate in the study, 20 males and 27 females. Caregivers completed a demographic questionnaire on which they identified types of trauma their children had experienced. Based on the listing of the types of trauma, children were then classified into categories of either children without trauma or children with trauma. Children without trauma had either experienced no trauma or things like divorce, moving, or deployment. These children were all located at the 4C's Head Start Centers. Children with trauma had all experienced some type of interpersonal trauma to include witnessing domestic violence, sexual abuse, physical abuse, emotional abuse, or a combination of these. In addition, some of the children with trauma had also experienced multiple moves, divorce or deployment in addition to their interpersonal trauma. Two of the children at Head Start were moved into the children with trauma group due to witnessing domestic violence and a concurrent other type of trauma. Of the total 47 children whose caregivers had consented for them to participate in the study, 23 had not experienced interpersonal trauma; whereas, 24 had

experienced interpersonal trauma. For analysis purposes, overall results, as well as, results for each group of children (children who experienced trauma and children who did not experience trauma) were obtained. Caregivers provided demographic data in several areas of the children's lives. Table 4.1 presents information about adult persons residing with the children and Table 4.2 presents information about the children's sibling statuses.

Table 4.1 Adults in the Household

Type of Adult	Total Sample N = 44*	Children without Trauma N = 20*	Children with Trauma N = 24
Both Parents	27.7% (13)	38.5% (10)	12.5% (3)
Mother & Stepfather	2.1% (1)	3.8% (1)	0.0% (0)
Mother & Significant Other	8.5% (4)	3.8% (1)	12.5% (3)
Both Parents & Aunt	6.4% (3)	7.7% (2)	4.2% (1)
Mother Only	29.8% (14)	15.4% (4)	41.7% (10)
Mother & Grandmother	2.1% (1)	3.8% (1)	0.0% (0)
Mother & Both Grandparents	4.3% (2)	3.8% (1)	4.2% (1)
Mother, Mother's Significant Other & Grandmother	4.3% (2)	0.0% (0)	8.3% (2)
Both Grandparents	4.3% (2)	0.0% (0)	8.3% (2)
Other Caregivers	4.3% (2)	0.0% (0)	8.3% (2)

*3 Did Not Respond

Table 4.2 Children's Sibling Statuses

Type of Sibling	Total Sample N = 43*	Children without Trauma N = 19*	Children with Trauma N = 24
Only Child	6.4% (3)	7.7% (2)	4.2% (1)
Older Brother(s)	12.8% (6)	11.5% (3)	12.5% (3)
Older Sister(s)	10.6% (5)	3.8% (1)	16.7% (4)
Younger Brother(s)	8.5% (4)	15.4% (4)	0.0% (0)
Younger Sister(s)	6.4% (3)	7.7% (2)	4.2% (1)
Older Brother(s) & Younger Sister(s)	2.1% (1)	0.0% (0)	4.2% (1)
Older & Younger Brothers	8.5% (4)	7.7% (2)	8.3% (2)
Older Sister(s) & Younger Brother(s)	10.6% (5)	3.8% (1)	16.7% (4)
Older Brother(s) & Sister(s) & Younger Brother(s)	6.4% (3)	3.8% (1)	8.3% (2)
Older Brother(s) & Sister(s) & Younger Sister(s)	4.3% (2)	0.0% (0)	8.3% (2)
Older Brother(s) & Younger Brother(s) & Sister(s)	4.3% (2)	3.8% (1)	4.2% (1)
Older Brother(s) & Sister(s) & Younger Brother(s) & Sister(s)	2.1% (1)	3.8% (1)	0.0% (0)
Older Brother(s) & Sister(s)	6.4% (3)	3.8% (1)	8.3% (2)

Table 4.2 Continued

Younger Brother(s) & Sister(s)	2.1% (1)	0.0% (0)	4.2% (1)
--------------------------------	----------	----------	----------

*4 Did Not Respond

Demographic information was also collected about the income level of the households. This information was collected because although half of the sample was from Head Start, new eligibility requirements allow for more diverse income levels to receive services depending on the risk level of the child. Further, since trauma transcends all income level, the researcher attempted to assess the diversity of the sample, albeit, an expectation existed that the majority of the sample would still be at the lower end of the income bracket due to sampling from the Head Start population. Incomes were divided into increments of \$15,000. As noted in the table, the total sample and group of children who had experienced trauma displayed diversity in income status; however, as expected the group of children who had not experienced trauma (the Head Start group) was gathered in the lower three brackets, with the greatest frequency of responses being in the lowest income level. Table 4.3 presents the income distribution by group.

Table 4.3 Household Income Levels

Income Range	Total Sample N = 43*	Children Without Trauma N = 20**	Children with Trauma N = 23***
Under \$15,000	46.8% (22)	46.2% (12)	41.7% (10)
\$15,001-\$30,000	14.9% (7)	15.4% (4)	12.5% (3)
\$30,001-\$45,000	19.1% (9)	15.4% (4)	20.8% (5)
\$45,001-\$60,000	4.3% (2)	0.0% (0)	8.3% (2)
\$60,001-\$75,000	2.1% (1)	0.0% (0)	4.2% (1)
\$75,001-\$90,000	4.3% (2)	0.0% (0)	8.3% (2)

*4 Did Not Respond; **3 Did Not Respond; ***1 Did Not Respond

Since children who have experienced trauma frequently have co-occurring psychiatric disorders, demographic information was also collected related to diagnoses that the children may have. It was anticipated, however, that very few children would have a co-occurring diagnosis, since at the time of the study, the children who had experienced trauma had only presented for an initial interview. Children who had not experienced trauma had the possibility

of having been assessed previously for a diagnosis if they had received therapy in the past, or if they had previously been referred for a mental health evaluation by Head Start. Neither of these occurrences were anticipated to have affected the outcome of the study. Table 4.4 presents the frequencies of psychiatric diagnoses in the sample presented by the group in which the child was placed.

Table 4.4 Frequencies of Children’s Co-Occurring Psychiatric Diagnoses

Diagnosis	Total Sample N = 45*	Children Without Trauma N = 21*	Children With Trauma N = 24
No Diagnosis	87.2% (41)	80.8% (21)	83.3% (20)
ADHD	4.3% (2)	0.0% (0)	8.3% (2)
Anxiety Disorder	2.1% (1)	0.0% (0)	4.2% (1)
Adjustment Disorder	2.1% (1)	0.0% (0)	4.2% (1)

*2 Did Not Respond

Caregivers also provided information about the ethnicity of their children. Caregivers were asked to identify the children’s ethnicity in an open-ended manner in order to allow for appropriate identification of ethnic heritage by the caregiver. Despite the researcher’s attempt to allow for a diverse way of classifying ethnic origins, the caregivers categorized their children into one of four categories – White, Black, Hispanic, or biracial or of mixed ethnic origin, which the caregivers indicated meant children were of Black and White descent. Table 4.5 provides a description of the ethnic origins of the children in the sample.

Table 4.5 Frequencies of Children’s Ethnicities

Ethnicity	Total Sample N = 45*	Children Without Trauma N = 21*	Children With Trauma
White	36.2% (17)	15.4% (4)	54.2% (13)
Black	36.2% (17)	34.6% (9)	33.3% (8)
Hispanic	12.8% (6)	19.2% (5)	4.2% (1)
Biracial/Mixed Ethnic Origin	10.6% (5)	11.5% (3)	8.3% (2)

*2 Did Not Respond

4.2 Descriptive Statistics for the TAYC

Although 47 caregivers consented for their children to be in the study, only 43 children were able to complete the Trauma Assessment for Young Children. Children did not provide

formal assent because of their ages; however, if any of the children became distressed during the procedure or demonstrated significant stranger or separation anxiety, the children were taken back to their caregivers and the assessment was ended. Further, if children were unable to complete the assessment, their instrument was not used in the data analysis. Consequently, these interventions led to a discrepancy between the number of consents and demographic information provided and the number of test results available for the analysis of the TAYC. Table 4.6 provides the descriptive statistics for the child-report TAYC.

Table 4.6 Score Range, Mean, & Standard Deviation of the Child Report TAYC

Group	N	Score Range	Mean	Standard Deviation
Total Sample	43	12 – 30	20.11	4.26
Children Without Trauma	23	12 – 30	20.11	4.66
Children With Trauma	20	13 – 25	20.00	3.84

Forty-seven caregivers also participated in the study. These caregivers were legal guardians of the children who participated in the study. The caregivers completed a caregiver version of the TAYC. Further, many caregivers completed some assessment instruments but did not complete all three assessment measures (the TAYC, the TSCYC, and the CBCL) leading to different response sizes for these measures as well. Consequently, only 38 caregivers actually completed the TAYC. The results for the range of scores, mean, and standard deviation are presented in Table 4.7.

Table 4.7 Score Range, Mean, & Standard Deviation of the Caregiver Report TAYC

Group	N	Score Range	Mean	Standard Deviation
Total Sample	38	7 – 28	17.00	4.54
Children Without Trauma	21	7 – 28	15.76	4.65
Children With Trauma	17	12 – 26	18.53	4.03

4.3 Inferential Statistics of Demographic Data

As mentioned previously, the children were nearly evenly split on gender. A student's t-test was conducted to determine if significant differences existed on the measures and their subscales based on gender. The measures of interest in the analyses were selected based on their importance in the instrument validation process. As a result, t-tests were conducted based on gender for the TAYC, total PTSD subscale of the Trauma Symptom Checklist for Young Children (Briere, 2005), and the attention, aggression, and total externalizing behaviors subscales of the Children's Behavior Checklist, both preschool and school-age version, whichever was age appropriate for the child (Achenbach & Rescorla, 2000; 2001). There were no significant differences found on any of the measures for gender.

For further demographic analysis purposes, analysis of variance was performed to determine if any differences based on ethnicity occurred since the sample was made of up of diverse backgrounds. These tests were conducted largely to ensure that the TAYC did not differ significantly among the different ethnicities so that the validation study could be conducted. If differences were found in the other measures, these could be relevant in this sample; however, both the previous measures were validated in diverse samples. As mentioned previously, the sample was 36.2% (n = 17) White, 36.2% (n= 17) Black, 12.8% (n = 6) Hispanic, 10.6% (n = 5) biracial or of mixed ethnicity, and 4.3% (n = 2) of the sample declined to report their ethnicity. Analyses of variance were conducted based on ethnicity on the subscales relevant to the study. Significant differences in ethnicity were found for the TSCYC on the total PTSD subscale. Specifically, significant differences were found on the total PTSD subscale between children of biracial descent and children who are Black or children who are Hispanic ($p \leq 0.05$). The group of children with trauma found significant differences based on ethnicity in multiple areas. These areas included the caregiver TAYC ($p \leq 0.05$), as well as, the and the total PTSD subscale of the TSCYC ($p \leq .01$). Specific analyses of these differences could not be conducted, and consequently the results must be viewed with caution due to

certain ethnic groups having fewer than two cases in the group of children with trauma. The results are presented by test and group in Table 4.8.

Table 4.8 ANOVA for Differences Among Ethnicities of TAYC, TSCYC, and CBCL

Test/Scale	Total Sample F (df) p	Children with Trauma F (df) p	Children without Trauma F (df) p
TAYC			
Child-Report	1.43 (42) 0.25	1.04 (19) 0.40	0.90 (22) 0.46
Caregiver-Report	0.79 (37) 0.51	3.44 (16) 0.50*	0.79 (20) 0.52
TSCYC			
PTSD	4.15 (42) 0.01*	13.50 (21) 0.00**	1.13 (20) 0.36
CBCL			
Attention	0.98 (44) 0.41	1.13 (21) 0.37	0.58 (22) 0.64
Aggression	0.87 (44) 0.47	1.19 (21) 0.34	0.60 (22) 0.63
Externalizing	0.93 (44) 0.46	1.13 (21) 0.30	0.62 (22) 0.61

*p ≤ 0.05; **p ≤ 0.01

4.4 Correlation Between Caregivers and Children

In addition to the descriptive properties of the measures used in this study, agreement between caregivers and children was assessed. An item by item analysis was conducted between the child-report TAYC and the caregiver report TAYC to determine if each item yielded higher or lower agreement between caregivers and children, particularly as literature has posited that caregivers may not be in tune with the internalized symptoms of children who have experienced trauma (Almqvist & Broberg, 2003; Chrisman, et. al., 2006). Following the completion of single item correlation, a total measure correlation was performed to determine if the full scales yielded any association between caregiver and child report. All of the correlations were either negligible or weak to moderate. Only one correlation was statistically significant – the correlation between the full scale child-report and full scale caregiver report TAYC in the control group. Table 4.9 presents the correlational data.

Table 4.9 Pearson's r Correlation Results Between Caregiver-Report and Child-Report TAYC Items

Question/Item	Total Sample r (N = 37)	Children With Trauma r (N = 16)	Children Without Trauma r (N = 21)
Question 1	0.18	-0.02	0.24
Question 2	0.06	0.00	0.14
Question 3	0.11	-0.05	0.18
Question 4	0.06	0.05	0.01
Question 5	-0.13	-0.09	0.25
Question 6	-0.01	-0.21	0.17
Question 7	0.04	0.01	0.07
Question 8	0.05	0.12	0.23
Question 9	0.25	0.39	0.25
Total TAYC	0.18	-0.32	0.46*

* $p \leq 0.05$

4.5 Psychometric Properties of the TAYC

The psychometric properties of the TAYC were assessed using test-retest reliability, known-groups validity, convergent validity, discriminant validity, and internal consistency. Where appropriate, each psychometric property was assessed on the full scale with all participants, and then separately on the children without trauma group and the children with trauma group for normative purposes.

4.5.1 Test-retest reliability

Pearson's r was used to establish test-retest reliability. Children in the children without trauma group were designated to determine test-retest reliability within an average two week period since their lives were considered to be the group that would have the least psychological or clinical intervention that would affect testing results. An average time period of two weeks between testing was chosen based on a review of the literature of young children who had been assessed by measures and had experienced some type of traumatic experience (see method section data analysis for references). The children were privately assessed on the TAYC. The initially assessment was scored. At a time period as close to two weeks later as possible, the children were individually and privately assessed again. A Pearson's r correlation was conducted between the initial testing administration score and the second testing administration score of each child to establish test-retest reliability of the instrument. Test-retest reliability for

the TAYC was moderately high ($r = 0.79$; $p \leq 0.001$). This result is viewed as particularly positive in light of the rapid maturation of 3-5 year old children, all of whom were in the children without trauma group, due to the Head Start Centers being selected for test-retest reliability assessment. Further this result is also viewed as very positive in light of the difficulty with temporal stability and proximity that young children have. Consequently for a measure assessing 3-5 year olds to possess test-retest reliability with of $r = 0.79$ at $p \leq .001$, not only is the result a positive psychometric, it possesses good clinical utility as well.

4.5.2 Internal Consistency

The TAYC was summed with questions 5 & 7 reverse scored to determine a total score for the measure. Internal consistency for both the caregiver version and the child version was established using Cronbach's alpha. When all caregivers are included together, the test has moderate internal consistency ($\alpha = 0.65$); however, when separated by groups, the group of children without trauma's caregivers' internal consistency remained similar ($\alpha = 0.65$); while the children with trauma group's caregivers' internal consistency changed ($\alpha = 0.61$). During the testing process, the researcher noted that many children who responded in a consistent manner to many of the test items, responded differently to the reverse score items. Consequently, the researcher also analyzed the internal consistency of the instrument without the reverse scored items. For the caregiver report version of the TAYC, without the reverse score items, the total sample demonstrated high internal consistency ($\alpha = 0.80$). The children without trauma group also demonstrated high internal consistency without the reverse score items on the caregiver report version ($\alpha = 0.83$). The children with trauma group demonstrated better internal consistency without the reverse score items on the caregiver report version ($\alpha = 0.70$).

The child version of the test demonstrated lower internal consistency, which may be due to the developmental level of the respondents, most of whom were ages 3 to 5. For the entire sample, $\alpha = 0.50$; whereas, for the children without trauma group, $\alpha = 0.56$. The

children with trauma group's TAYC yielded a lower internal consistency ($\alpha = 0.48$). As mentioned above, children appeared to respond differently to the reverse scored items, so the researcher also assessed internal consistency of the measure without those items. For the total sample, the internal consistency of the child report measure increased ($\alpha = 0.63$). The children without trauma group also demonstrated an increase in internal consistency on the child report version of the measure when the reverse score items were removed ($\alpha = 0.69$). The children with trauma group child report version of the measure increased in internal consistency as well when the reverse score items were removed ($\alpha = 0.61$).

4.5.3 Convergent Validity

Since only caregiver-report items were available to assess trauma symptoms in children for the age group for which the TAYC was developed, only the caregiver report TAYC was used to establish convergent validity. To establish convergent validity of the TAYC, the Trauma Symptom Checklist for Young Children (TSCYC) was used. This measure has three specific subscales relevant to trauma and a total PTSD subscale. The subscales are relevant to the DSM-IV-TR's diagnostic criteria for PTSD and include post-traumatic symptoms related to intrusiveness (PTSI), post-traumatic symptoms related to avoidance (PTSAV), and post-traumatic symptoms related to arousal (PTSAR) (Briere, 2005). Since the TAYC is a brief item measure and overtly measures more intrusiveness than arousal or avoidance symptoms, a decision was made as to which subscale to use to determine convergent validity. The need for measuring more intrusiveness symptoms on the TAYC arose due to the suggestion that intrusiveness symptoms may be those symptoms of which caregivers are less aware because avoidance and arouse symptoms can be more easily observed (Almqvist & Broberg, 2003). Further, the total PTSD subscale on the TSCYC is a sum of the other three subscales, consequently if another measure does accurately assess PTSD, the measure would, at least to an extent assess avoidance and arousal symptoms if it correlates to the total PTSD subscale. Therefore, to assess if the TAYC measured PTSD as a whole, the correlation between the

caregiver version of the TAYC and the PTSD subscale was anticipated to be strong and significant. For the TAYC to have good convergent validity, it was first anticipated that there would be a moderate to large correlation with the TSCYC PTSD subscale in the total sample, and specifically, that there would be higher correlation between the children with trauma group caregiver report TAYC and the PTSD subscale. The results for convergent validity are listed in table 4.10 below.

Table 4.10 Correlation of the TAYC with the TSCYC PTSD Subscale for Convergent Validity

Group	N	TSCYC PTSD Subscale/TAYC r
Total Sample	38	0.41*
Children Without Trauma	21	0.12
Children With Trauma	17	0.59*

* $p \leq 0.05$

The TAYC demonstrated good convergent validity with the TSCYC, particularly in the group of children with trauma. Since the measure was designed to assess severity of trauma symptoms in children who had experienced a trauma, this psychometric result is positive. The strong, positive, significant correlation between the total PTSD subscale of the TSCYC and the TAYC in the children with trauma group indicates that children who scored high on the TSCYC PTSD subscale also scored high on the TAYC and vice versa. In turn, this result indicates the TAYC does indeed assess trauma symptoms in a manner similar to an established scale. The similar result for the total sample provides a similar assessment. The lack of correlation in the children without trauma group could be explained by a conceptual difficulty. The TSCYC assesses traumatic experiences based on abuse; while the TAYC does not. This conceptual difference could have led to a lack of correlation in the children without trauma group.

4.5.4 Discriminant Validity

To determine discriminant validity of the TAYC, the Child Behavior Checklist, CBCL was used. The CBCL has a specific externalizing scale that measures problems with attention and aggressive behaviors and then combines these issues for a total externalizing score

(Achenbach & Rescorla, 2000; 2001). Although it has been demonstrated that traumatized children experience difficulties with attentiveness and aggression, it was believed that a measure of these problems would be minimally correlated with a measure of more overt, diagnostically PTSD related trauma symptoms. Consequently, Pearson's r correlations were conducted with each externalizing subscale, as well as the total externalizing subscale of the CBCL for the total sample of caregiver respondents, the children without trauma group, and the children with trauma group. For the total sample and the children without group, aggressive and externalizing subscales were moderately and significantly correlated with the caregiver-report TAYC; however, each of the subscales in the children with trauma group did not reach statistical significance and was only weakly correlated, demonstrating discriminant validity. See table 4.11 below for the discriminant validity results.

Table 4.11 Correlation of the TAYC with the CBCL Subscales for Discriminant Validity

Group	N	CBCL Attention Subscale/TAYC r	CBCL Aggression Subscale/TAYC r	CBCL Total Externalizing Subscale/TAYC r
Total Sample	38	0.29	0.43**	0.41*
Children Without Trauma	21	0.42	0.55**	0.54*
Children With Trauma	17	0.14	0.26	0.24

* $p \leq 0.05$; ** $p \leq 0.01$

The TAYC demonstrated good discriminant validity with the group of children with trauma, which was the goal. The TAYC was not designed to measure inattentiveness, aggression, or externalizing behaviors in general; consequently, the TAYC should either be negatively correlated with the CBCL externalizing subscales indicating that high scores on the CBCL subscales would relate to low scores on the TAYC. However, in the case of the TAYC, the two measures are not related at all. The TAYC and the CBCL should not display any type of relationship since the TAYC does not measure inattentiveness and only possesses one question that measures aggression. Therefore, the TAYC should display no correlation or a weak positive or negative and nonsignificant correlation with the CBCL subscales. As can be

seen from the analysis, while these findings did not hold true with the total sample and the children without trauma group, they were accurate for the children with trauma group. This result is highly important, demonstrating that the TAYC possesses good discriminant validity in the population for which it was intended. The measure is able to accurately differentiate between trauma symptoms and acting out behaviors and/or inattentiveness in children who have experienced a trauma.

4.5.5 Known Groups Validity

Known groups validity would be helpful in determining if the TAYC can successfully differentiate between traumatized children and non-traumatized children. One of the difficulties with this concept, is that children frequently perceive trauma in a different light than do adults, consequently making known groups validity a useful tool in theory, but difficult in practicality, as discussed in the literature review. Despite this difficulty, a t-test determined if there was a significant difference in total TAYC scores between the children without group children and the children with trauma children. No significant difference was found between the two groups on their total TAYC scores ($t = 0.18$; $p = 0.86$). This result must be viewed with caution in light of the small sample size, small standard deviations, and limited power with the child-report version of the measure. Based on this analysis, it is possible that known groups validity could exist in the child-report version, but at this time, the sample size is too small to conduct meaningful t-test analysis with means that are so similar. However, due to the consideration of using the caregiver-report measure to establish the validity of the measure, and due to correlation between the caregiver-version and the child-version being low for most groups (total sample $r = 0.19$, $p = 0.27$; children without trauma group $r = -0.46$, $p \leq 0.05$; children with trauma $r = -0.32$, $p = 0.22$), known groups validity was also tested on the caregiver-report measure. This test found that the caregiver version of the TAYC does indeed have the ability to differentiate between children who have experienced interpersonal trauma and those who have not ($t = -2.43$; $p \leq 0.05$). The known groups validity for the caregiver-report version of the

measure is very promising since this result indicates that the TAYC can discriminate between children who have and have not experienced trauma, at least by caregiver report.

4.6 Conclusions

The Trauma Assessment for Young Children possesses promising beginning psychometrics. The measure established high test-retest reliability ($r = 0.79$) and moderate internal consistency, which improved when the reverse score items were removed ($\alpha = 0.48-0.69$ child-report; $\alpha = 0.61-0.83$ caregiver-report). The measure demonstrated good convergent validity with strong, positive, significant correlation with another trauma measure, particularly in the group with children who had experienced trauma, which is exactly what it was designed to do ($r = 0.59$). It also demonstrated good discriminant validity in the group of children who have experienced a trauma by demonstrating weak, nonsignificant correlation with the CBCL subscales of attention, aggression, and externalizing behaviors, again, demonstrating that the TAYC measures trauma, not inattentiveness, aggressive behavior, or externalizing behaviors in children who have experienced trauma ($r = 0.14-0.26$). Finally, the TAYC was able to differentiate between children who had experienced trauma and children who had not experienced trauma in the caregiver-report version of the measure. These preliminary psychometrics are promising for the initial validation study of the measure. The strengths and limitations of the study will be further discussed in the next chapter.

CHAPTER 5

DISCUSSION

Childhood trauma is an issue that faces numerous children in today's society (ACF, 2006). Consequently, accurate assessment of trauma symptoms becomes an essential task to practitioners working with children. Trauma symptoms affect a myriad of areas in children's daily functioning including somatic, academic, interpersonal, dissociative, behavioral, cognitive, self-concept, and affective arenas (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Several measures exist for assessing trauma in young children; however, they are all caregiver-report measures and vary according to the appropriateness based on age and type of trauma in their ability to assess all young children (Briere, 2005; Friedrich, 1997; Saigh, 2004; Saigh, et. al., 2000; Saylor, et. al., 1999). Further assessment of symptoms in children is often difficult because caregivers can be unaware of what the child is experiencing, or they may prefer some of the internalizing symptoms that tend to leave children quieter and more cooperative (Almqvist & Broberg, 2003; Chrisma, et. al., 2006). Social workers have a responsibility to help children tell others about their experiences and symptoms through the development of self-report measures.

5.1 Descriptive Statistics

The present study created a self-report measure of trauma symptoms in young children and the tested its psychometric properties. A caregiver-report version was also developed and used to perform certain validity assessments of the instrument. The TAYC for both caregiver-report and child-report had reasonably consistent standard deviations, remaining between approximately 3.5 – 4.5 points regardless of whether it was the caregivers or the children who responded; however, the means varied based on the type of report. The child report measure

approximately 3.5 – 4.5 points regardless of whether it was the caregivers or the children who responded; however, the means varied based on the type of report. The child report measure did not differ greatly among the groups with the mean remaining very close to 20.00; whereas, the caregiver-report means differed for the children without trauma versus the children with trauma groups. The children without trauma group's mean was 15.76; while, the children with trauma group's mean was 18.53, demonstrating that caregivers whose children have experienced trauma display higher reports of symptoms in their children. This finding was expected, given that children who experienced trauma should have higher trauma scores, on average than children who did not experience trauma. To determine the normative value of these numbers, demographic differences became important. No significant gender differences were found in any of the measures used in this study.

Differences among the different ethnic/racial groups were also assessed for each measure used in the study. Significant differences were found among the ethnicities for the total sample on the TSCYC PTSD subscale, the children with trauma group's caregiver report TAYC, and children with trauma group's TSCYC PTSD subscale. These differences in the children with trauma group were likely due to the very small number of biracial or children of mixed ethnicity. In the total sample, a similar explanation of differences could exist. Another possible explanation, particularly for the total sample, could be that the TSCYC may not have been easily understood or necessarily appropriate for people of different ethnic backgrounds, particularly since not only were they ethnically diverse, but because of many participants coming from a military community, many participants were from geographically diverse backgrounds, including other countries, which means English was their second language. Although the TSCYC was validated on an ethnically diverse sample, it is recommended that the instrument is used with people who speak English (Briere, 2005). Although participants in the study were able fluent in reading and speaking English, some of the participants had English as their second language, so the possibility exists that cultural differences may have affected the

testing. Despite these differences, the small sample size likely played a greater part than any true testing differences, so further research is warranted to determine the true extent of these results.

5.2 Strengths of the Study

5.2.1 Reliability Strengths

The Trauma Assessment for Young Children (TAYC) possessed several strengths in its psychometric properties. The test-retest reliability was assessed on children without trauma; the TAYC possessed high test-retest reliability, indicating that children's responses remained stable over time. Further research is warranted to determine the test-retest reliability with children who have experienced trauma, but who have not yet received intervention for their traumatic experience to determine if the results found in the children who have not experienced trauma are similar to children who have experienced trauma.

Internal consistency was assessed in the caregiver-version of the TAYC, as well as, the child-version of the TAYC. Cortina (1993) suggested that coefficient alpha is good at 0.70 when a measure has a small number of items and measures one dimension (PTSD). Considering this level of acceptance, the measure possessed an acceptable level of internal consistency, among caregivers, with slightly higher internal consistency found in the total sample and the children without trauma group than the children with trauma group (alpha = 0.65; 0.65; 0.65 respectively). Further, the child-report measure yielded moderately acceptable internal consistencies (alpha = 0.50; 0.56; 0.48 respectively). One possible explanation for the difference between the caregiver-report and child-report internal consistencies could be the developmental level of young children. Since the majority of the sample was ages 3-5, by the very nature of their ages, they tend to not have a great deal of internal consistency. This age group tends to have a minimal understanding of time, tends to have a beginning understanding of sequencing, is able to express emotions but not necessarily verbally, and may still be developing their sense of self and others (Mayo Foundation for Medical Education and

Research, 1998-2011). In both the caregiver-report and child-report measures, the children with trauma group demonstrated the lowest internal consistency. This result may be due to the possibility that children who have experienced a trauma experience difficulties with self-concept, thereby, indicating that they have an unstable sense of self, which in turn may lead them to respond in an inconsistent manner (Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Caregiver-report measures may present some difficulty with internal consistency due to the discrepancy in knowledge between internalizing symptoms and externalizing symptoms. Caregivers can easily observe externalizing symptoms and be aware of the frequency with which they occur; however, caregivers may be unaware of or possibly even prefer when children experience internalizing symptoms. Consequently caregivers may under- or over-report internalizing symptoms, leading a measure to have lower internal consistency (Almqvist & Broberg, 2003; Chrisman, et. al., 2006). Further research is needed to determine if the measure's internal consistency, particularly in the trauma group, is affected by reporting discrepancies.

Finally, one of the difficulties with the internal consistency with this measure may have been the inclusion of the two reverse-scored items. While the literature indicates that children who have experienced trauma have difficulty in the academic realm with issues, such as decreased grades, behavioral problems, and attention problems (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005), item number 5 that asked how well children were doing in school appeared to be problematic. Item number 7, which assessed how much children feel like playing also appeared to be problematic with this measure. This question was developed based on literature that indicated that children who have experienced trauma have problems with social isolation (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). These two questions appeared to be answered both by caregivers and children in a manner that contributed to social desirability bias, as the answers tended invariably to be favorable. Since these items were the only items that were reverse-scored, the

researcher removed them and conducted an internal consistency analysis again. Without these two items, the caregiver-report internal consistency on the measure reached levels deemed as good in standard research texts ($\alpha = 0.70-0.83$) (Rubin & Babbie, 2011). The child-report measure improved with the removal of these two items, as well. The removal improved the internal consistency to near the recommended level set forth by Cortina (1993) in his explanation of coefficient alpha ($\alpha = 0.61-0.69$). The children with trauma group again remained the lowest in internal consistency when compared with the children without trauma group or the total sample. The potential reasons for the lower consistency in the designated trauma group have been discussed above. Further research is needed to determine if the inclusion of these two items leads to confusion in reporting, social desirability bias, or if their exclusion improves the internal consistency of the measure because these two items do not accurately measure the trauma symptoms assessed.

5.2.2 Validity Strengths

The TAYC also possessed good convergent validity with the Trauma Symptom Checklist for Young Children (TSCYC) (Briere, 2005) as predicted. The TAYC and TSCYC was moderately and significantly correlated on the PTSD subscale for the entire sample, and strongly and significantly correlated for the PTSD subscale for the children trauma group. These findings indicate that the TAYC has high convergent validity with another trauma measure; thereby, demonstrating that it does indeed measure trauma symptoms in young children. The TAYC and TSCYC subscales did not correlate for children without trauma group, which was a bit unexpected since it would be expected that children without trauma would score similarly on each measure. Although children without trauma were expected to score similarly on each measure, since these children did not experience trauma, they were expected to receive a low score on each measure. A possible explanation for this lack of correlation could have been the focus of the TSCYC on abuse experiences, and the ability for the TAYC to measure any traumatic experience the child or caregiver wished to disclose or perceive as

trauma. Despite this lack of correlation in the children without trauma group, the TAYC, demonstrated good convergent validity with the total sample and especially with the children with trauma group, which is promising since the measure was designed to assess trauma symptoms, and therefore, the goal is to accurately assess trauma symptoms in children who have experienced a trauma.

The Trauma Assessment for Young Children (TAYC) also demonstrated good discriminant validity with the Child Behavior Checklist (CBCL) (Achenbach & Rescorla, 2000; 2001) as predicted. While moderate significant correlations were found between the CBCL aggressive and total externalizing subscales and the TAYC when the total sample was used, and moderate to large significant correlations were found between the CBCL aggressive and total externalizing subscales in the children without trauma group, weak non-significant correlations were found between the CBCL subscales and the TAYC for the children with trauma group. These correlations indicate that the TAYC is able to differentiate externalizing symptoms as a whole, aggression, and attention symptoms from trauma symptoms in children who have experienced a trauma. This differentiation is very important considering that children who have experienced trauma have been noted to experience attention difficulties, problems with aggressive behavior, and oppositional – defiant behavior, all of which are measured by the CBCL (Achenbach & Rescorla, 2000; 2001; Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005).

The final type of validity explored for the psychometric testing was known groups validity. Known groups validity was established for the caregiver-report version of the TAYC but not for the child-report version of the measure. Possible reasons for the lack of differentiation between the groups in the child-report version of the TAYC include children's perception of what is traumatic. Children were given the opportunity to respond to items based on any event that they viewed as traumatic. This reporting had the potential to lead children who were not traumatized by interpersonal trauma or another event that adults would perceive as traumatic to

report that they had numerous symptoms in response to believing that monsters lived in their closet or similar childhood events. For children in this age group, who are just learning temporal associations experiencing a nightmare the previous night or being hit very hard by a sibling the day before has the possibility of being as bad, sad, and scary, as being abused in the past six months (Mayo Foundation for Medical Education and Research, 1998-2011). Whereas, caregivers in the control versus designated trauma groups are able to identify trauma versus typical childhood events and respond to the items accordingly. The difficulty for caregivers, as mentioned previously, often comes in being aware of internalizing symptoms; however, to differentiate between the children without trauma and children with trauma groups, this issue is not problematic as both caregiver groups would experience this issue similarly.

Finally, since literature indicated that caregivers and children experience symptoms differently, sometimes in regard to internalizing symptoms and sometimes related to the possibility of the caregivers' own trauma issues, the researcher analyzed correlation between the entire scale and individual items to determine if this issue existed for the TAYC (Almqvist & Broberg, 2003; Chrisman, et. al., 2006; Steele & Raider, 2001). Each item on the TAYC, as well as, the total TAYC was negligibly to weakly correlated between the child-report and the caregiver-report with one exception. The only significant correlation was between the child-report and caregiver-report total TAYC, which was a moderate correlation. This correlation was likely higher and more significant due to the children without group having the participants with the greatest number of caregivers who themselves were less likely to have experienced a traumatic experience, since the majority of the designated trauma group participants' caregivers had experienced domestic violence. Another possibility for the increased correlation with the children without trauma group's TAYC total scores is that children with trauma group's caregivers, regardless of their own trauma status are distressed by their children's traumatic experience, which leads them to be either more or less sensitive to their children's symptoms (Steele & Raider, 2001).

5.2.3 External Validity Strengths

The study possessed strengths in its ability to be generalized as well. Although the sample size was very small, it possessed a great deal of diversity. Several ethnic groups were represented in the study, and Black and White individuals were evenly represented. Males and females were also evenly represented in the study. Further, although income was weighted more heavily at the lower end of the spectrum, in a large part due to the children without trauma coming from Head Start Centers, the children with trauma had similar income levels, but also represented diverse income as well ranging into the high end of the income spectrum. Finally, demographic data on the household make-up of the children's homes and their sibling statuses was collected. There was great diversity in both the adults with whom the children resided and the sibling statuses of the children. This diversity indicates that the sample is representative of a variety of children's living experiences. Further, the description of the study design makes it easily replicable allowing for further assessment of the measurement instrument for further validation purposes, allowing for strength of external validity in both the generalizability of the sample, particularly to children who have experienced interpersonal trauma and in the study's ability to be replicated.

5.2.4 Overall Strengths

The strengths of the present study focus on the psychometric properties of test-retest reliability, convergent and discriminant validity. Internal consistency using Cronbach's Alpha is also a strength; however, the researcher would desire an even higher alpha, considering adults were participants. The study also possesses strength in that it is an innovative way to measure trauma symptoms in children using a communication modality in which they are comfortable. Landreth (2002) maintains that play is the appropriate form of communication for young children. Through utilizing a stuffed cat to help children process and identify trauma symptoms, the researcher provided a unique method to allow children to communicate via their own means. Further, the assessment method considered the psychosocial and cognitive

developmental levels of children by providing a nondirective and accepting means for children to identify what they consider to be their traumatic experiences, asking questions in a manner in which they understood, and having a nonverbal means of allowing children to respond to items (CDI, 2007; Church, 2006; Ginsburg, 1992; Hamachek, 1985; Prambling, 2006). The study also possessed strength in that the assessment measure combined numerous theoretical approaches to defining childhood trauma and worked to narrow the symptoms, diagnostic criteria, and analysis behind the approaches into a concise format to which children of a young age could respond. This theoretical reduction was discussed at length in the methodology and resulted in a format in which a combination of developmental trauma theory, complex trauma theory, and alternative diagnostic PTSD criteria for preschoolers could be combined in one brief assessment (Alkhatib, et. al, 2007; APA, 2000; Bender & Sims, 2007; Carmichael & Lane, 1997; Cook, et. al., 2005; Corcoran, 2000; Dehon & Scheeringa, 2006; Haen & Brannen, 2002; Horton & Cruise, 1997; Kenny, 2000; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Shackman, et. al., 2007; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; St. Thomas & Johnson, 2002; Van der Kolk, 2005; Wikstrom, 2005).

One of the outcomes of the study was that the caregiver-report measure and the child-report measure were not highly correlated. The total sample and the traumatized groups had weak, nonsignificant correlations between caregivers and children; while the control group had a moderate, significant correlation between caregivers and children. This outcome was a strength for the study in that it was a predicted outcome since many trauma symptoms are internalized, and the prediction was made that there would be a low correlation between caregivers and children due to these internalized symptoms, as well as, the intrusiveness symptoms being experienced only by the child (Almqvist & Broberg, 2003; Chrisman, et. al., 2006).

5.3 Limitations of the Study

5.3.1 Overall Limitations

Many strengths of the study are also limitations. The lack of correlation between caregivers and children on their TAYC results is considered to be a strength because this result was anticipated. This result becomes a limitation as well, since results could vary if caregivers were more in touch with their children's symptomatology. Further, caregivers in the children with trauma group may have difficulty acknowledging their children's symptoms dependent upon if they too have been traumatized and share the same perpetrator, as in the case of domestic violence, if they are having difficulty coping with their children's trauma, as in the case of abuse issues, or if they have not been with the children for a very long period of time, as in the case where protective services has only recently placed the children with the caregiver (Almqvist & Broberg, 2003; Steele & Raider, 2001). Alternatively, caregivers could be in touch with their children's symptomatology and rate it with an effort to be consistent based on behavior over time; whereas, young children live in the moment and may rate behavior and symptoms as to how they have felt in the last day or two based on their cognitive developmental level (CDI, 2007; Church, 2006; Prambling, 2006).

5.3.2 Validity Limitations

A limitation to the study, was the inability to determine known groups validity. The TAYC should be able to differentiate between children who have experienced trauma and those children who have not experienced trauma; however, there was no significant difference between the two groups. Possible explanations for this inability to differentiate between these known groups, again include the children's developmental levels, so control group children may have felt and reported traumatizing symptoms the day of their testing, which led them to score similarly to their traumatized counterparts. Another explanation could be the common experiences of many young children that overlap with items on the assessment measure, such as experiencing stomachaches, wanting to play, and doing well at school or day care. On these

particular items, caregivers tended to have diverse reports while children remained consistent, indicating on stomachaches a response bias in favor of stomachaches, and on the other items a social desirability bias. The children also appeared to have a social desirability bias on the item that measured regressed behaviors while the caregivers did not. Another explanation for difficulty differentiating between the designated trauma group and the control group is the assumption that children in the control group had not experienced trauma. While children at Head Start were picked to be the control group because of the inherent stability in Head Start programming, a guarantee does not exist that these children have not experienced trauma. Further, because of the location of these Head Start centers, the likelihood that children have experienced trauma of parental deployment or multiple moves at a minimum is high. Consequently, difficulty distinguishing between groups may have existed due to the possibility of traumatic experiences existing in both groups.

5.3.3 External Validity Limitations

Perhaps the greatest limitation of the study lies within its small sample size. All of the results, both positive and negative, must be viewed with caution due to the small sample size. Although, the sample size correlates with the needed number of respondents to achieve central limit theorem ($n > 30$) and power for correlations was achieved at the 80% and 90% levels for the significance levels of $p \leq 0.05$ and $p \leq 0.01$, the sample size was too small to achieve power for the comparison of means (Machin, et. al., 1997). Further, the study would have been more robust, and the findings better able to be generalizable had there been a larger number of subjects. Although the participants were diverse in ethnicity, equally matched in gender, and hailed from a variety of locations, the majority of participants were still in lower to lower middle socio-economic backgrounds and from a small urban area. This similarity among participants could not only limit the study's generalizability, but could also affect the results, as potentially higher socioeconomic status participants or participants from more rural or more metropolitan areas may experience trauma differently based on the resources available to them. Further, all

of the participants are located in the Central Texas region. This factor may both a limit and be a strength for generalizability. Initially, the Central Texas region appears to be an area that may be unique geographically, as well as, idealistically, thus limiting generalizability; however, because of the military concentration of the area, and in many of the participants, geographic location in and of itself does not indicate a particular mindset or affinity to the area. As a result, military affiliation both increases and decreases the generalizability of the study; however, as there is a mix of military participants and nonmilitary participants in the study, the Central Texas location may still be a limit to the study's overall external validity.

5.4 Implications of the Study

5.4.1 Implications for Social Work Practice

The present study has numerous implications for social work practice. The most practical implication is the ability to assess trauma symptoms in young children. Trauma symptoms have been described to affect young children's lives on a myriad of levels. These levels include typical diagnostic trauma symptoms such as intrusive images, nightmares and flashbacks, which were assessed with questions one, two, and six of the assessment, which assess nightmares, and visual and auditory flashbacks (APA, 2000; Cook, et. al., 2005; Dehon & Scheeringa, 2006; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Trauma symptoms also affect children's affective function, including their ability to handle anxiety and fears, depressive symptoms in the form of social withdrawal, and their ability to handle irritability and anger, which often leads to aggression (APA, 2000; Alkhatib, et. al, 2007; Bender & Sims, 2007; Cook, et. al., 2005; Corcoran, 2000; Dehon & Scheeringa, 2006; Horton & Cruise, 1997; Kenny, 2000; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; St. Thomas & Johnson, 2002; Van der Kolk, 2005; Wikstrom, 2005). Questions three, seven, and eight provide ways that practitioners can assess for problems in the affective arena of functioning, as these items address fear, social withdrawal or activity, and

aggressive behaviors. Children who have experienced trauma often exhibit difficulties in the realm of interpersonal functioning through aggressive behavior, isolative or withdrawn behavior, or regressed and/or clingy behavior (Alkhatib, et. al., 2007; APA, 2000; Bender & Sims, 2007; Carmichael & Lane, 1997; Cook, et. al., 2005; Corcoran, 2000; Dehon & Scheeringa, 2006; Haen & Brannen, 2002; Horton & Cruise, 1997; Kenny, 2000; Rasmussen & Cunningham, 1995; Shackman, et. al. 2007; Steele & Raider, 2001; Stronach-Bushel, 1990; St. Thomas & Johnson, 2002; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Practitioners can assess these dysfunctions in interpersonal functioning through questions five, eight, and nine, which assess issues with social withdrawal, aggression, and regression. Children also often display somatic dysfunction or problems with bodily integrity following a traumatic experience (Alkhatib, et. al., 2007; APA, 2000; Bender & Sims, 2007; Cook, et. al., 2005; Dehon & Scheeringa, 2006; Haen & Brannen, 2002; Scheeringa, et. al., 2003; Scheeringa & Zeenah, 2008; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Practitioners can use the measure to assess these symptoms through questions one, four, and nine since nightmares or sleep disturbances are considered somatic complaints at times, stomachaches are common childhood somatic complaints, and many regressed behaviors, particularly related to enuresis and encopresis are common in children who have experienced chaos or trauma. Finally, the measure can assist practitioners in assessing young children's trauma symptoms related to behavioral problems. Young children with trauma symptoms frequently exhibit behavioral problems in the areas of inattention or difficulties with academics, aggressive behavior, withdrawn or isolative behavior, and/or regressed behavior (Alkhatib, et. al., 2007; APA, 2000; Bender & Sims, 2007; Carmichael & Lane, 1997; Cook, et. al., 2005; Corcoran, 2000; Dehon & Scheeringa, 2006; Haen & Brannen, 2002; Horton & Cruise, 1997; Kenny, 2000; Lieberman, et. al., 2005; Rasmussen & Cunningham, 1995; Scheeringa, et. al., 2003; Scheering, et. al. 2008; Shackman, et. al., 2007; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Stronach-Bushel, 1990; St. Thomas & Johnson, 2002; Van der Kolk, 2005).

Questions five, seven, eight, and nine can assist practitioners in determining if these behaviors are an issue for the children with whom they are working by assessing these symptoms.

Providers can use developmentally appropriate assessment measures like the TAYC to assess trauma symptoms in children through children's own voices, which is indicated as caregiver-report measures have the potential to be skewed by caregiver's own traumatic experiences or by caregiver's propensity to pay more attention to externalizing symptoms (Almqvist & Broberg, 2003; Chrisman, et. al., 2006). Further, since the TAYC demonstrated good convergent and discriminant validity, the measure can be a useful tool to help practitioners assess the severity of trauma symptoms in children who have experienced trauma. Higher scores indicate more severe symptoms. Armed with early awareness of children's trauma symptoms, practitioners can provide appropriate diagnosis, which can then lead to better evidence-based treatments for children who have experienced trauma in hopes of ameliorating problems prior to adulthood.

5.4.2 Implications for Social Policy

The Trauma Assessment for Young Children (TAYC) possesses some implications for policy as well. Since legislative bodies dictate to some extent how children in certain traumatic situations are treated, this instrument has beneficial implications to the child welfare system. Individuals working in child welfare, child advocacy centers, child protective services, and the foster care system, particularly foster parents, need to be aware of the trauma symptoms that affect young children, especially those symptoms identified with complex and developmental trauma theories since the children in these systems have experienced interpersonal trauma. Legislative bodies have the authority to mandate trainings for these personnel and for foster providers in the areas of symptoms of complex trauma and developmental trauma disorder. Legislation should mandate that children who have experienced interpersonal trauma and subsequently receive attention through the child welfare system receive testing to determine the severity of their trauma symptoms. Due to the discrepancy that has been noted in the literature

between caregiver-reports of children's symptoms and children's reports of their own symptoms, legislation should mandate that both caregiver-report assessment instruments and child-report assessment instruments be given to assess trauma symptoms, with equal weight given to the child-report measures (Almqvist & Broberg, 2003; Chrisman, et. al., 2006) The TAYC provides a way for both caregivers and children to provide similar reports of symptoms, while other measures tend to focus solely on caregivers. Legislation can also mandate that child welfare workers are familiar with different assessment instruments and how to read the results of their findings.

Given the emphasis on evidence-based practice, legislation could be enacted in which contracting providers with protective services would use the TAYC as a diagnostic tool, as well as, an evaluative tool to determine the effectiveness of their work with the children with whom they are working. Legislators currently have evaluative tools in place for many such providers, but they focus on caseworker and caregiver satisfaction rather than behavioral or symptom improvement. The TAYC as a self- and caregiver-report trauma symptom measure could be a useful tool for legislators and funders to ensure that practitioners are indeed accurately assessing and effectively treating this vulnerable group of children. Finally, the TAYC can have implications for agency policy use as well. Agencies that serve children who have experienced trauma, such as children's advocacy centers, domestic violence shelters, even social work services at military bases, could make policies to use the instrument to determine what level of trauma symptoms children are experiencing. These policies can be very important when there are waiting lists at agencies, or a need exists to determine which children have the highest priority to be served. The agency directors could enact a policy in which children scoring highest or most at risk on the TAYC receive the first or most intense services.

5.4.3 Implications for Future Research

While the Trauma Assessment for Young Children (TAYC) demonstrated good test-retest reliability, moderate internal consistency, and good convergent and discriminant validity,

further research needs to be completed in the area of this assessment instrument. First, future research needs to be completed with a larger sample size to further determine the content validity of the instrument through factor analysis. Additionally, a larger sample size would help to determine if the instrument has known groups validity, as the small sample size makes differences in children, whether labeled as control or traumatized, difficult to establish. Since young children experience and perceive trauma differently than adults, the difficulty in establishing known groups validity may be related to sample size or may be related to the nature of trauma in children (Hamachek, 1985; Steele & Raider, 2001). Regardless of the potential reason known groups validity was not established in the present study, a larger sample size in future research may help with this issue. Further, with larger sample sizes of different groups of children, determinations could be made, not only if there are differences between children with trauma and children without trauma, but if differences exist between children who have experienced different types of trauma, for example interpersonal trauma and natural disasters or house fires.

Future research, with larger sample sizes, is needed with the TAYC to determine if there are significant differences in scores based on demographic data. While the present study found no significant differences based on gender or ethnicity, research with larger sample sizes should be performed to determine if these results remain consistent. Included in future research about demographic differences, particularly differences based on ethnicity needs to be exploration about the potential that differences may occur in people who speak English as a second language or in individuals who have lower reading levels than perhaps a sixth to eighth grade reading level as is indicated in most psychological testing. The validation study of the TAYC found significant differences on the Trauma Symptoms Checklist for Young Children PTSD Subscale in the total sample and the children with trauma group, as well as, the caregiver-report version of the TAYC in the children with trauma group based on ethnicity. Although these differences were likely a function of small sample size, the possibility exists that

the reading level of some of the participants in English or even the reading level itself could have affected the results, since some of the adult participants had English as their second language. Further research into this area would clarify if the differences were a function of sample size or if language and reading level are a needed area of investigation and modification in assessment instruments.

Further, demographic information in this study was collected related to participants' presence or absence of DSM-IV-TR diagnoses. The dearth of diagnoses in the sample was likely due to the requirement that the children could not have received counseling for their traumatic experience prior to experiencing the testing instrument. Future research could benefit from determining if children who have different diagnoses score differently on the TAYC, particularly with diagnoses that are common in children who have experienced trauma, such as PTSD, other anxiety disorders, mood disorders, elimination disorders, and behavior disorders (Becker-Weidman, 2006; Bhatia, et. al., 1990; Bittner, et. al., 2007; Brown University, 2002; Carli, 1987; Durkin, et. al., 1993; Felman & Nikitas, 1983; Ford, et. al., 1999; Gauthier, et. al., 1970; Harvard Medical School, 2007; Kearney, et. al., 2003; Iglesias & Iglesias, 2008; Inan, et. al., 2007; Roesler, et. al., 1993; Scheeringa, et. al., 2003; Scheeringa & Zeanah, 2008; Sklarew & Blum, 2006; Strickler, 2007; Tali, et. al., 1998; Van der Kolk, 2005).

Finally, demographic differences in living arrangements could be assessed to see if these arrangements make a difference in children's trauma scores. Living arrangements have the potential to play an important part in children's perceptions of and experience of trauma symptoms. These living arrangements can affect children from the children still living with the perpetrator of the trauma and consequently experiencing ambivalent or fearful feelings, which lead to many of the symptoms described in complex trauma theory and developmental trauma disorder, to children living with caregivers who have also experienced trauma and consequently these caregivers' traumatic experiences also affect their care and perception of their children's experiences and symptoms, to caregivers who have no experience with perpetration or

traumatic experience, but have a high level of support which leads to more secure attachment for children (Ainsworth, et. al., 1978, Almqvist & Broberg, 2003; Cook, et. al., 2005; Steele & Raider, 2001; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Consequently, future research on the interaction between caregivers' roles and children's trauma scores on the TAYC may be of great value, not only to determine how perceptive caregivers are of children's trauma symptoms, but additionally to help practitioners and policy makers better provide for the future care of these children depending upon the results of future studies in regard to any differences in trauma scores and living arrangements.

In the field of trauma research, implications for future research exist within the nature of trauma itself and its effects on young children. Although much research has been done in this area looking at various trauma symptoms related to children who have experienced divorce, physical, sexual, and emotional abuse, children who live with parents addicted to substances, children who have experienced severe illness or medical procedures, children who have witnessed domestic violence, and children who have experienced grief and loss, this myriad of symptoms needs to be evaluated to determine if there exists an overlap among all of these types of trauma or if each type of trauma affects children in a distinct manner (Alkhatib, et. al., 2007; Bender & Sims, 2007; Carmichael & Lane, 1997; Corcoran, 2000; Haen & Brannen, 2002; Horton & Cruise, 1997; Kenny, 2000; Lieberman, et. al., 2005; Rasmussen & Cunningham, 1995; Shackman, et. al., 2007; Stronach-Bushel, 1990; St. Thomas & Johnson, 2002; Wikstrom, 2005). Through the use of future research, the TAYC could be a helpful instrument in assessing if PTSD symptoms vary according to the aforementioned specific traumas or if certain symptoms overlap with certain traumatic experiences.

Since children typically experience interpersonal trauma, developmental trauma disorder and experiences of complex trauma have been theorized to demonstrate specific arenas of dysfunction in children as well. These dysfunctions include the areas of interpersonal, dissociative, affective, behavioral, cognitive, self-concept, and somatic dysfunction (Cook, et.

al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). Along a similar vein, preschool children have been found to display different PTSD symptoms than adults, leading to the recommendation that the criteria set forth in the DSM-IV-TR be modified for children in this age group. These recommendations include the modification of the number of criteria that need to be present in the clusters representing avoidant, re-experiencing, and arousal symptoms, the modification of the criterion that there must be an experience of extreme emotional distress following the trauma. The recommended elimination of this criterion is based on the limited verbal ability of young children, especially in relation to expressing their feelings, and the potential limits in caregiver abilities to note distress, particularly if they too have experienced the traumatic situation or are the perpetrators of the trauma (Scheeringa et. al., 2001; 2003; 2005; Scheeringa & Zeenah, 2001). Research that attempts to determine if a consistency or overlap exists between developmental trauma disorder and the alternative criteria for PTSD in preschool children would be vital to the field of trauma research in young children. Further, since the TAYC was developed based largely on the theoretical concepts set forth in developmental trauma disorder and complex trauma theory combined with the recommendations for alternative PTSD criteria in preschool children, it could be used as a tool to assist with this research.

5.5 Conclusions

Although there are many implications for future research, the validation study of the Trauma Assessment for Young Children provided important implications for practice and policy. The instrument demonstrated preliminary psychometrics that were largely positive, which is beneficial to the field of trauma research in young children since a self-report measure for children in this age group currently does not exist. The Trauma Assessment for Young Children was designed to assess the severity of trauma symptoms in children who were already known to have experienced a trauma. By demonstrating good convergent validity with the Trauma Symptom Checklist for Young Children's PTSD subscale (Briere, 2005), the TAYC

demonstrated that it is able to assess trauma symptoms in children, particularly children who have experienced a trauma. This result was a particularly positive result in light of the intent of the measure's design. Further, the TAYC demonstrated good discriminant validity with the Child Behavior Checklist (Achenbach & Rescorla, 2000; 2001). The TAYC demonstrated that in children who have experienced a trauma, it does indeed assess trauma symptoms rather than symptoms of inattentiveness, aggressiveness, or externalizing symptoms in general. Again, this result was very positive in light of the intent of the creation of the measure. Further, the TAYC demonstrated high test-retest reliability, indicating that responses tend to remain consistent over time. Considering the majority of the participants were between the ages of 4 and 5, the ability for responses to the items to remain consistent over even a two week period was a very positive result. According to Cortina (1993), on a measure with few items geared to measuring one dimension (PTSD), an internal consistency of $\alpha = 0.70$ is considered good. As a result, the TAYC demonstrated moderate internal consistency, and with the removal of the reverse score items, the internal consistency improved to a range that is considered good for the caregiver-report version and moderate for the child-report version. Finally, the measure possessed known groups validity for the caregiver-report version, demonstrating that it does have the ability to differentiate between children who have and who have not experienced trauma. All of these preliminary psychometrics demonstrate that the TAYC has promising clinical utility to be a measure that will allow children who have experienced a trauma the ability to be accurately assessed for the severity of their symptoms by clinicians.

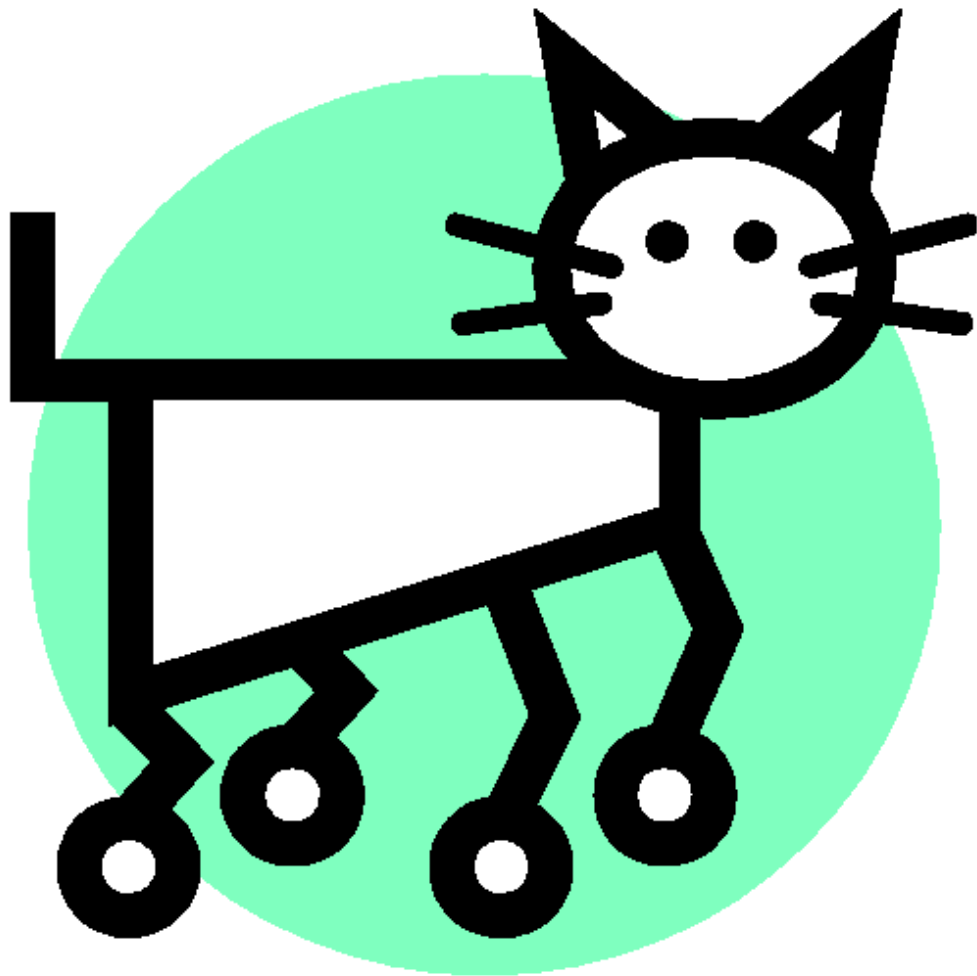
The establishment of this measure provides children who have experienced trauma with the means to voice their symptoms and experiences in a method that is comfortable to them, thereby meeting ethical requirements for social work practice, including social justice, respecting the dignity and worth of the person, competence, and the importance of human relationships (NASW, 2008). The TAYC also meets the Council on Social Work Education's requirements that social work educators teach based on practice based research and research

based practice (CSWE, 2008). This concept is extremely important to the development and further use of this measure. The measure was initially based on the theoretical work of practitioners who observed the symptoms of traumatized children, who then researched these symptoms and made theoretical models (Cook, et. al., 2005; Streeck-Fisher & Van der Kolk, 2000; Van der Kolk, 2005). This researcher then used these theoretical models to create a measure upon which research was conducted. Practice will then be based on research as the TAYC is used in practice, and then further research should be conducted to determine how the TAYC scores differ based on different types of trauma and with different co-occurring disorders. Finally, with the establishment of the TAYC, accurate and thorough assessment of young children who have experienced trauma of any type, regardless of its severity, whether or not it is interpersonal in nature, will have the ability to be assessed and potentially receive early diagnosis and intervention in hopes of ameliorating any future difficulty they may have in the future. The ability to accurately assess the severity of trauma symptoms in young children, regardless of the type of trauma that has occurred, according to children's own perceptions in a psychometrically sound way will be the contribution of the Trauma Assessment for Young Children.

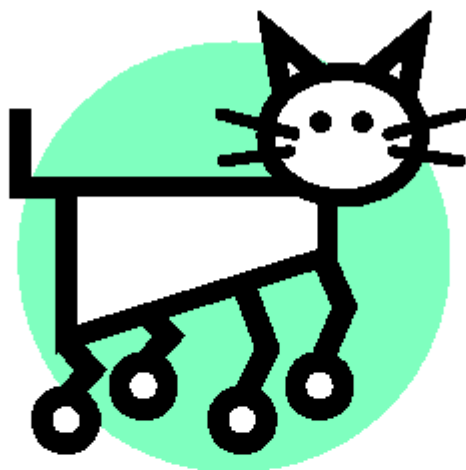
APPENDIX A
ORIGINAL VERSION OF THE TRAUMA ASSESSMENT
FOR YOUNG CHILDREN

TRAUMA ASSESSMENT FOR YOUNG CHILDREN

By Heidi L. Strickler, LCSW, CEDS, CART, CTLS



I am Scampi. I had a bad, sad, scary thing happen to me, just like the bad, sad, scary thing that happened to you. Tell me about the bad, sad, scary thing was that happened to you.



The bad, sad, scary thing was _____

(Please be sure to complete both sides of each page)



I use my paw prints to let people know how upset I am about the bad, sad, scary thing that happened. I also use my paw prints to tell people how many times I have certain problems.



This paw print means Scampi has the problem none of the time.



This paw print means Scampi has the problem a little bit of the time.



This paw print means Scampi has the problem a lot of the time.



This paw print means Scampi has the problem all of the time.

I am going to tell you about some of the things that have happened to me since the bad, sad, scary thing. On each page, you need to pick the paw print that shows how much of the time you have the same problems that I am having. If you have questions, ask the person who is reading to you about me.



Since the bad, sad, scary thing happened, Scampi doesn't like to go to sleep because he has bad, scary dreams. How much do you have bad, scary dreams? Point to the paw print that shows how much.





Since the bad, sad, scary thing happened, Scampi has had pictures of what happened be inside his head. How much do you have pictures of the bad, sad, scary thing come into your head. Point to the paw print that shows how much.





Since the bad, sad, scary thing happened, Scampi feels scared most of the time.
Since the bad, sad, scary thing happened, how much do you feel scared? Point to the paw print that shows how much.





Before the bad, sad, scary thing happened, Scampi used to like to eat and felt good. After the bad, sad, scary thing happened, Scampi's stomach hurt a lot of the time. Point to the paw print that shows how much of the time your stomach hurts since the bad, sad, scary thing happened.





Before the bad, sad, scary thing happened, Scampi used to like to play and have fun with his friends. Since the bad, sad, scary thing happened, Scampi doesn't feel like playing as much. Point to the paw print that shows how much of the time you feel like playing.





Since the bad, sad, scary thing happened, Scampi hears noises that remind him of what happened. Point to the paw print that shows how much of the time you hear noises that remind you of the bad, sad, scary thing.





Before the bad, sad, scary thing happened, Scampi felt safe when he was away from the people who take care of him. Since the bad, sad, scary thing happened, Scampi wants to always be with the people who take care of him. Point to the paw print that shows how much you want to be with the people who take care of you since the bad, sad, scary thing happened.





Before the bad, sad, scary thing happened, Scampi did a good job at school. Since the bad, sad, scary thing happened, Scampi is not doing a very good job at school. Point to the paw print that shows what a good job you are doing at school.





Before the bad, sad, scary thing happened, Scampi got along really well with other cats. Since the bad, sad, scary thing happened, Scampi has been having a hard time getting along with other cats. Sometimes he yells at them or fights with them. Point to the paw print that shows how much you yell or fight with other people.



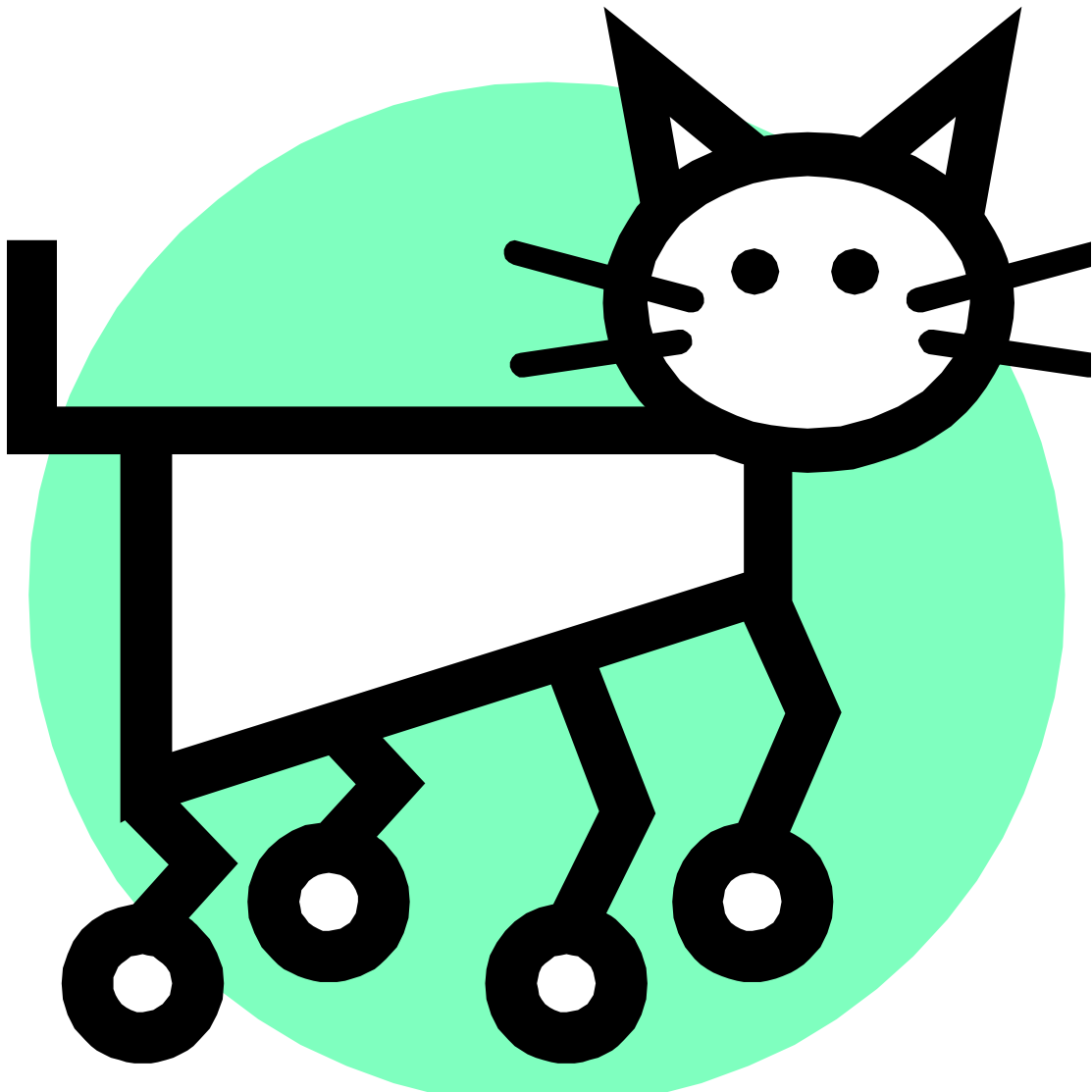


Before the bad, sad, scary thing happened Scampi acted like a five year old cat. Since the bad, sad, scary thing that happened, Scampi has been acting like he is a younger, littler cat. He forgets how to use the litter box and started to suck his paws again. Point to the paw print that shows how many times you do things that you did when you were younger and littler since the bad, sad, scary thing happened (wet the bed, suck thumb).

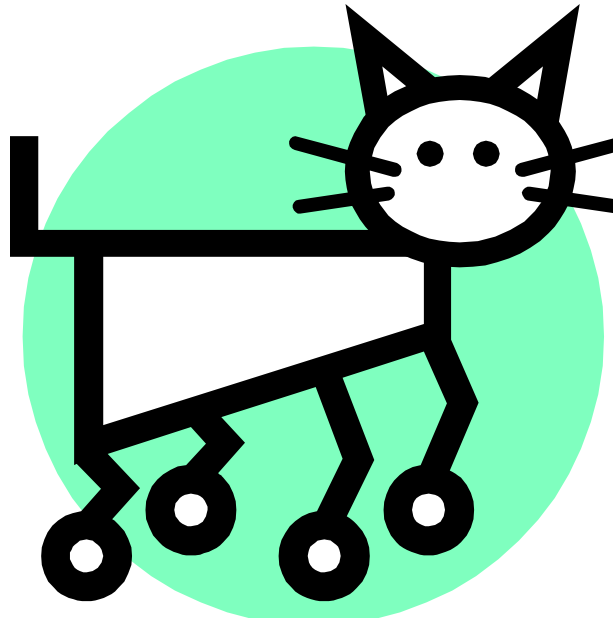


THE TRAUMA ASSESSMENT FOR YOUNG CHILDREN

By Heidi L. Strickler, LCSW, CEDS, CART, CTLS



I am Scampi. I had a bad, sad, scary thing happen to me, just like the bad, sad, scary thing that happened to you. Tell me about the bad, sad, scary thing was that happened to you.



The bad, sad, scary thing was _____

(Please be sure to complete both sides of each page)

I am going to tell you about some of the things that have happened to me since the bad, sad, scary thing. On each page, you need to pick the paw print that shows how much of the time you have the same problems that I am having. If you have questions, ask the person who is reading to you about me.

(Parents – Please circle the answer that you believe your child will choose).

Since the bad, sad, scary thing happened, Scampi doesn't like to go to sleep because he has bad, scary dreams. How much do you have bad, scary dreams? Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi has had pictures of what happened be inside his head. How much do you have pictures of the bad, sad, scary thing come into your head. Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi feels scared most of the time. Since the bad, sad, scary thing happened, how much do you feel scared? Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi used to like to eat and felt good. After the bad, sad, scary thing happened, Scampi's stomach hurt a lot of the time. Point to the paw print that shows how much of the time your stomach hurts since the bad, sad, scary thing happened. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi used to like to play and have fun with his friends. Since the bad, sad, scary thing happened, Scampi doesn't feel like playing as much. Point to the paw print that shows how much of the time you feel like playing. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi hears noises that remind him of what happened. Point to the paw print that shows how much of the time you hear noises that remind you of the bad, sad, scary thing. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi felt safe when he was away from the people who take care of him. Since the bad, sad, scary thing happened, Scampi wants to always be with the people who take care of him. Point to the paw print that shows how much you want to be with the people who take care of you. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi did a good job at school. Since the bad, sad, scary thing happened, Scampi is not doing a very good job at school. Point to the paw print that shows what a good job you are doing at school. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi got along really well with other cats. Since the bad, sad, scary thing happened, Scampi has been having a hard time getting along with other cats. Sometimes he yells at them or fights with them. Point to the paw print that shows how much you yell or fight with other people. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

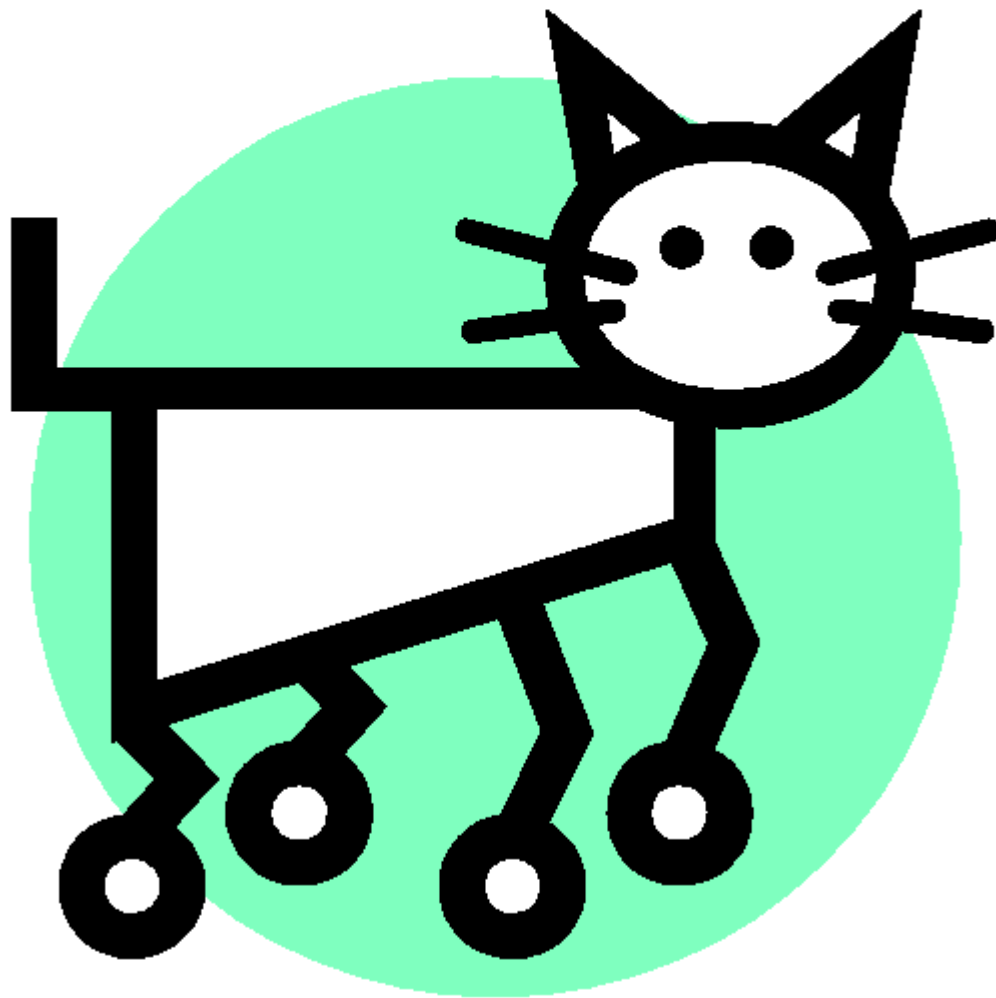
Before the bad, sad, scary thing happened Scampi acted like a five year old cat. Since the bad, sad, scary thing that happened, Scampi has been acting like he is a younger, littler cat. He forgets how to use the litter box and started to suck his paws again. Point to the paw print that shows how many times you do things that you did when you were younger and littler since the bad, sad, scary thing happened (wet the bed, suck thumb). Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

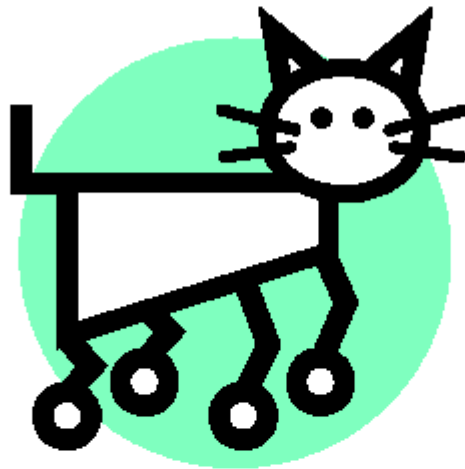
APPENDIX B
THE TRAUMA ASSESSMENT FOR YOUNG CHILDREN

TRAUMA ASSESSMENT FOR YOUNG CHILDREN

By Heidi L. Strickler, LCSW, CEDS, CART, CTLS



I am Scampi. I had a bad, sad, scary thing happen to me, just like the bad, sad, scary thing that happened to you. Tell me about the bad, sad, scary thing was that happened to you.



The bad, sad, scary thing was _____

(Please be sure to complete both sides of each page)



I use my paw prints to let people know how upset I am about the bad, sad, scary thing that happened. I also use my paw prints to tell people how many times I have certain problems.



This paw print means Scampi has the problem none of the time.



This paw print means Scampi has the problem a little bit of the time.



This paw print means Scampi has the problem a lot of the time.



This paw print means Scampi has the problem all of the time.

I am going to tell you about some of the things that have happened to me since the bad, sad, scary thing. On each page, you need to pick the paw print that shows how much of the time you have the same problems that I am having. If you have questions, ask the person who is reading to you about me.



Since the bad, sad, scary thing happened, Scampi doesn't like to go to sleep because he has bad, scary dreams. How much do you have bad, scary dreams? Point to the paw print that shows how much.





Since the bad, sad, scary thing happened, Scampi has had pictures of what happened be inside his head. How much do you have pictures of the bad, sad, scary thing come into your head. Point to the paw print that shows how much.





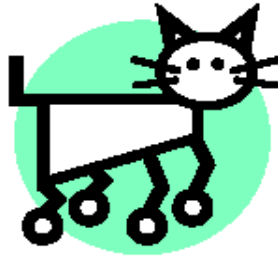
Since the bad, sad, scary thing happened, Scampi feels scared most of the time.
Since the bad, sad, scary thing happened, how much do you feel scared? Point to
the paw print that shows how much.





Before the bad, sad, scary thing happened, Scampi used to like to eat and felt good. After the bad, sad, scary thing happened, Scampi's stomach hurt a lot of the time. Point to the paw print that shows how much of the time your stomach hurts since the bad, sad, scary thing happened.





Before the bad, sad, scary thing happened, Scampi used to like to play and have fun with his friends. Since the bad, sad, scary thing happened, Scampi doesn't feel like playing as much. Point to the paw print that shows how much of the time you feel like playing.





Since the bad, sad, scary thing happened, Scampi hears noises that remind him of what happened. Point to the paw print that shows how much of the time you hear noises that remind you of the bad, sad, scary thing.





Before the bad, sad, scary thing happened, Scampi did a good job at school. Since the bad, sad, scary thing happened, Scampi is not doing a very good job at school. Point to the paw print that shows what a good job you are doing at school.





Before the bad, sad, scary thing happened, Scampi got along really well with other cats. Since the bad, sad, scary thing happened, Scampi has been having a hard time getting along with other cats. Sometimes he yells at them or fights with them. Point to the paw print that shows how much you yell or fight with other people.



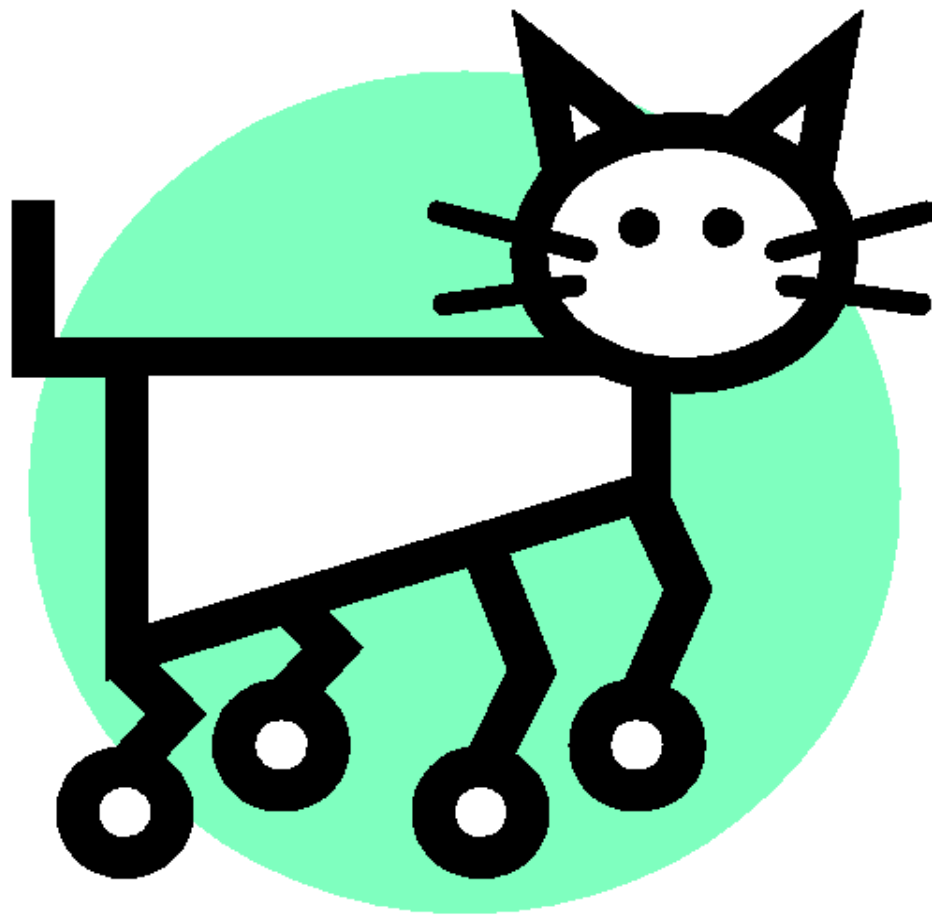


Before the bad, sad, scary thing happened Scampi acted like a five year old cat. Since the bad, sad, scary thing that happened, Scampi has been acting like he is a younger, littler cat. He forgets how to use the litter box and started to suck his paws again. Point to the paw print that shows how many times you do things that you did when you were younger and littler since the bad, sad, scary thing happened (wet the bed, suck thumb).

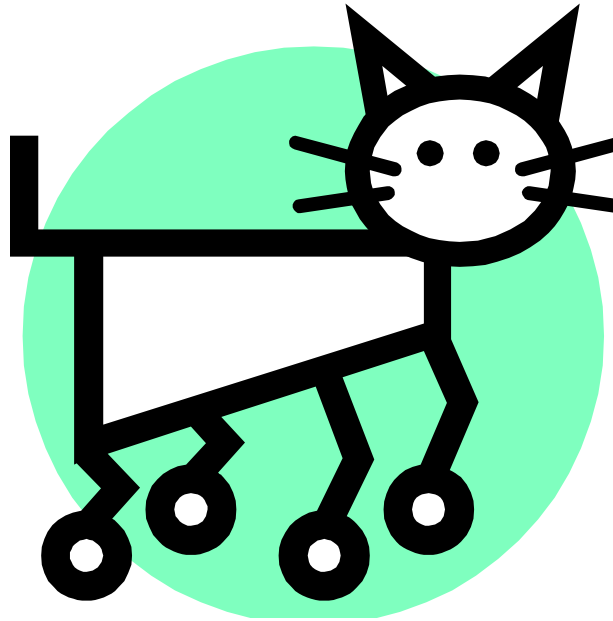


TRAUMA ASSESSMENT FOR YOUNG CHILDREN

By Heidi L. Strickler, LCSW, CEDS, CART, CTLS



I am Scampi. I had a bad, sad, scary thing happen to me, just like the bad, sad, scary thing that happened to you. Tell me about the bad, sad, scary thing that happened to you.



The bad, sad, scary thing was _____

(Please be sure to complete both sides of each page)

I am going to tell you about some of the things that have happened to me since the bad, sad, scary thing. On each page, you need to pick the paw print that shows how much of the time you have the same problems that I am having. If you have questions, ask the person who is reading to you about me.

(Parents – Please circle the answer that you believe your child will choose).

Since the bad, sad, scary thing happened, Scampi doesn't like to go to sleep because he has bad, scary dreams. How much do you have bad, scary dreams? Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi has had pictures of what happened inside his head. How much do you have pictures of the bad, sad, scary thing come into your head. Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi feels scared most of the time. Since the bad, sad, scary thing happened, how much do you feel scared? Point to the paw print that shows how much. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi used to like to eat and felt good. After the bad, sad, scary thing happened, Scampi's stomach hurt a lot of the time. Point to the paw print that shows how much of the time your stomach hurts since the bad, sad, scary thing happened. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi used to like to play and have fun with his friends. Since the bad, sad, scary thing happened, Scampi doesn't feel like playing as much. Point to the paw print that shows how much of the time you feel like playing. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Since the bad, sad, scary thing happened, Scampi hears noises that remind him of what happened. Point to the paw print that shows how much of the time you hear noises that remind you of the bad, sad, scary thing. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi did a good job at school/day care. Since the bad, sad, scary thing happened, Scampi is not doing a very good job at school/day care. Point to the paw print that shows what a good job you are doing at school/day care. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened, Scampi got along really well with other cats. Since the bad, sad, scary thing happened, Scampi has been having a hard time getting along with other cats. Sometimes he yells at them or fights with them. Point to the paw print that shows how much you yell or fight with other people. Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

Before the bad, sad, scary thing happened Scampi acted like a five year old cat. Since the bad, sad, scary thing that happened, Scampi has been acting like he is a younger, smaller cat. He forgets how to use the litter box and started to suck his paws again. Point to the paw print that shows how many times you do things that you did when you were younger and smaller since the bad, sad, scary thing happened (wet the bed, suck thumb). Circle the amount you believe your child will choose.

None of the Time A Little of the Time A Lot of the Time All of the Time

REFERENCES

- Achenbach, T. M., & Rescorla, L. A. (2000). *Manual for the ASEBA Preschool-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA School-Age Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, & Families.
- Adler-Nevo, G. & Manassis, K. (2005). Psychosocial treatment of pediatric posttraumatic stress disorder: The neglected field of single-incident trauma. *Depression and Anxiety, 22*, 177-189.
- Administration for Children and Families. (2006). An issue facing all communities: The national scope of the problem. Safe children and healthy families are a shared responsibility. Retrieved November 20, 2005, from http://nccanch.acf.hhs.gov/topics/prevention/childabuse_neglect/scope.cfm.
- Ainsworth, M., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment*. Hillsdale, NJ: Erlbaum.
- Alkhatib, A., Regan, J., & Barrett, D. (2007). The silent victims: Effects of war and terrorism on child development. *Psychiatric Annals, 37*(8), 586-589.
- Almqvist, K., & Broberg, A. G. (2003). Young children traumatized by organized violence together with their mothers: The critical effects of damaged internal representations. *Attachment & Human Development, 5*(4), 367-380.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, text revision. (4th ed.)*. Washington D.C.: Author

- Bainum, C. R., Schneider, M. F., & Stone, M. H. (2006). An Adlerian model for sandtray therapy. *The Journal of Individual Psychology, 62*(1), 36-46.
- Bayer, J. K., Sanson, A. V., & Hemphill, S. A. (2006). Children's moods, fears, and worries: Development of an early childhood parent questionnaire. *Journal of Emotional and Behavioral Disorders, 14*(1), 41-49.
- Becker-Weidman, A. (2006). Treatment for children with trauma-attachment disorders: Dyadic developmental psychotherapy. *Child and Adolescent Social Work Journal, 23*(2), 147-171.
- Bender, W. N., & Sims, R. (2007). Katrina kids! Helping kids exposed to population-wide trauma. *Teaching Exceptional Children, 40*(1), 40-47.
- Bernt, F. M. (2004). Review of Child Sexual Behavior Inventory. *Mental Measurements Yearbook, 14*. Retrieved January, 18, 2010, from, <http://libproxy.uta.edu:2067/ehost/delivery?vid=24&hid=112&sid=8eb62bfc-5c84-4297-a...>
- Bhatia, M. S., Dhar, N. K., Singhai, P. K., Nigam, V. R., Malik, S.C., & Mullick, D. N. (1990). Temper tantrums: Prevalence and etiology in a non-referral outpatient setting. *Clinical Pediatrics, 31*1-315.
- Bittner, A., Egger, H. L., Erkanli, A., Costello, E. J., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology and Psychiatry, 48*(12), 1174-1183.
- Black, B. & Uhde, T. (1995). Psychiatric characteristics of children with selective mutism: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*(7), 847-856.
- Bowlby, J. (1969). *Attachment and loss, vol. 1: Attachment*. New York: Basic Books.

- Bratton, S., Landreth, G. L., Kellan, T., & Blackard, S. R. (2006). *Child parent relationship therapy (CPRT) treatment manual: A 10-session filial therapy model for training parents*. New York: Routledge.
- Brazelton, T. B., & Greenspan, S. I. (2006). Why children need ongoing nurturing relationships. *Early Childhood Today, 21*(3), 14-15.
- Briere, J., Johnson, K., Bissada, A., Damon, L., Crouch, J., Gil, E., et. al. (2001). The trauma symptom checklist for young children (TSCYC): Reliability and association with abuse exposure in a multi-site study. *Child Abuse & Neglect, 25*, 1001-1014.
- Briere, J. (2005). *The trauma symptom checklist for young children*. Lutz, FL: Psychological Assessment Resources, Inc.
- Brown University (2002). Understanding the trauma of bedwetting. *The Brown University Child and Adolescent Behavior Letter, 18*(1), 1-7.
- Carli, A. (1987). Psychological consequences of political persecution: The effects on children of the imprisonment or disappearance of their parents. *Tidsskrift for Norsk Psykologforening, 24*, 82-93.
- Carmichael, K. D., & Lane, K. S. (1997). Play therapy with children of alcoholics. *Alcoholism Treatment Quarterly, 15*(1), 43-51.
- Case, C. (2005). The mermaid: Moving towards reality after trauma. *Journal of Child Psychotherapy, 31*(3), 335-351.
- Celano, M., Hazzard, A., Webb, C., & McCall, C. (1996). Treatment of traumagenic beliefs among sexually abused girls and their mothers: An evaluation study. *Journal of Abnormal Child Psychology, 24*, 1-17.
- Celik, G., Diler, R. S., Tahiroglu, A. Y., & Avci, A. (2007). Fluoxetine in posttraumatic eating disorder in 2 year old twins. *Journal of Child and Adolescent Psychopharmacology, 17*(2), 233-236.

- Chemtob, C. M., Nakashima, J., & Carlson, J. G. (2002). Brief treatment for elementary school children with disaster-related posttraumatic stress disorder: A field study. *Journal of Clinical Psychology, 58*, 99-112.
- Chemtob, C. M., Nakashima, J., & Hamada, R. S. (2002). Psychosocial intervention for postdisaster trauma symptoms in elementary school children. *Archives of Pediatric and Adolescent Medicine, 156*, 211-216.
- Child Development Institute (2007). *Stages of intellectual development in children and teenagers*. Retrieved May 20, 2008, from www.childdevelopmentinfo.com/development/piage.shtml
- Chrisman, A., Egger, H., Compton, S. N., Curry, J., & Goldson, D. B. (2006). Assessment of childhood depression. *Child and Adolescent Mental Health, 11*(2), 111-116.
- Church, E. B. (2006). "I have special powers!" How children use magical thinking: Understanding how children use magical thinking to learn about and explore their world. *Early Childhood Today, 20*(5), 30-33.
- Cohen, J. A., Deblinger, E., Mannarino, A. P., & Steer, R. A. (2004). A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 393-402.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Cook, A., Spinazzola, J., Ford, J., Lanktree, C., Blaustein, M., et. al., (2005). Complex trauma in children and adolescents. *Psychiatric Annals, 35*(5), 390-398.
- Cooper, R. J. (2000). The impact of child abuse on children's play: A conceptual model. *Occupational Therapy International, 7*(4), 259-276.
- Corbin, J. R. (2007). Reactive attachment disorder: A biopsychosocial disturbance of attachment. *Child Adolescent Social Work Journal, 24*, 539-552.

- Corcoran, J. (2000). Family interventions with child physical abuse and neglect: A critical review. *Children and Youth Services Review, 22*(7), 563-591.
- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and application. *Journal of Applied Psychology, 78*(1), 98-104.
- Costin, C. (2006). *The eating disorder sourcebook (3rd ed.)*. Belmont, CA: Gurze Books.
- Council on Social Work Education (2008). *Educational policy and accreditation standards*. Retrieved January 24, 2010, from <http://www.cswe.org/File.aspx?id=13780>.
- Davies, S. L., Glaser, D., & Kossoff, R. (2000). Children's sexual play and behavior in pre-school settings: Staff's perceptions, reports, and responses. *Child Abuse and Neglect, 24*(10), 1329-1343.
- Deblinger, E., Lippmann, J., & Steer, R. (1996). Sexually abused children suffering from posttraumatic stress symptoms: Initial treatment outcome findings. *Child Maltreatment, 1*, 310-321.
- Deblinger, E., McLeer, S. V., & Henry, D. (1990). Cognitive behavioral treatment for sexually abused children suffering from post-traumatic stress: Preliminary findings. *Journal of the American Academy of Child and Adolescent Psychiatry, 25*, 747-752.
- Dehon, C., & Scheeringa, M. S. (2006). Screening for preschool posttraumatic stress disorder with the child behavior checklist. *Journal of Pediatric Psychology, 31*(4), 431-435.
- De Rios, M. D. (1997). Magical realism: A cultural intervention for traumatized Hispanic children. *Cultural Diversity and Mental Health, 3*(3), 159-170.
- Doll, B. (2004). Review of Child Behavior Checklist. *Mental Measurements Yearbook, 13*, Retrieved January 18, 2009, from <http://libproxy.uta.edu:2067/ehost/delivery?vid=3-&hid=112&sid=8eb62bfc-5c84-4297-a...>
- Durkin, M. S., Khan, N., Davidson, L. L., Zaman, S. S., & Stein, Z. A. (1993). The effects of a natural disaster on child behavior: Evidence for posttraumatic stress. *American Journal of Public Health, 83*(11), 1549-1553.

- Ederer, E. M. (1998). Depressive symptoms in young children: Self-, parent-, and teacher-reports. *Studia Psychologica*, 40(1-2), 95-106.
- Estrada, P., Arsenio, W. F., Hess, R. D., & Holloway, S. D. (1987). Affective quality of mother-child relationship: Longitudinal consequences for children's school-relevant cognitive functioning. *Developmental Psychology*, 23, 210-215.
- Farrell, S. P., Hains, A. A., & Daviews, W. H. (1998). Cognitive behavioral intervention for sexually abused children exhibiting PTSD symptomatology. *Behavior Therapy*, 29, 241-255.
- Feeny, N. C., Foa, E. B., Treadwell, K. R., & March, J. (2004). Posttraumatic stress disorder in youth: A critical review of the cognitive and behavioral treatment outcome literature. *Professional Psychology Research and Practice*, 35(5), 466-476.
- Felman, Y. M. & Nikitas, J. A. (1983, March). Sexually transmitted diseases and child sexual abuse: Part 1. *New York State Journal of Medicine*, 341-343.
- Flanagan, R. (2004). Review of the Achenbach System of Empirically Based Assessment. *Mental Measurements Yearbook*, 17.
- Ford, J. D., Racusin, R., Daviss, W. B., Ellis, C. G., Thomas, J., Rogers, K. et. al. (1999). Trauma exposure among children with oppositional defiant disorder and attention deficit-hyperactivity disorder. *Journal of Counseling and Clinical Psychology*, 67(5), 786-789.
- Friedrich, W. N. (1997). *Child Sexual Behavior Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Furlong, M. (2004). Review of Child Behavior Checklist. *Mental Measurements Yearbook*, 13, Retrieved January 18, 2009, from <http://libproxy.uta.edu:2067/ehost/delivery?vid=3-&hid=112&sid=8eb62bfc-5c84-4297-a...>

- Gauthier, Y., Drapeau, P., Leclaire, F., Fortin, C., & Forget, G. (1970). Le diagnostic et les fonctions du moi des enfants encopretiques. *Canadian Psychiatric Association Journal*, 15, 265-277.
- Gil, E. (1991) *The healing power of play: Working with abused children*. New York: The Guilford Press.
- Ginsburg, H. J. (1992). Childhood injuries and Erikson's psychosocial stages. *Social Behavior and Personality*, 20(2), 95-100.
- Gorusch, R. L. (1983). *Factor analysis* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Gregorian, V. S., Azarian, A., DeMaria, M. B., & McDonald, L. D. (1996). Colors of disaster: The psychology of the "black sun." *The Arts in Psychotherapy*, 23(1), 1-14.
- Haen, C., & Brannon, K. (2002). Superheroes, monsters, and babies: Roles of strength, destruction, and vulnerability for emotionally disturbed boys. *The Arts in Psychotherapy*, 29, 31-40.
- Hall, S. E., & Geher, G. (2003). Behavioral and personality characteristics of children with reactive attachment disorder. *The Journal of Psychology*, 137(2), 145-162.
- Hamachek, D. E. (1985). The self's development and ego growth: Conceptual analysis and implications for counselors. *Journal of Counseling and Development*, 64, 136-142.
- Harper, J. (1991). Children's play: The differential effects of intrafamilial physical and sexual abuse. *Child Abuse and Neglect*, 15, 89-98.
- Harvard Medical School (2007). Separation anxiety. *Harvard Mental Health Letter*, 23(7), 1-3.
- Hatcher, L. (1994). *A step-by-step approach to using the SAS® System for factor analysis and structural equation modeling*. Cary, N.C.: SAS Institute, Inc.
- Horton, C. B., & Cruise, T. K. (1997). Clinical assessment of child victims and adult survivors of child maltreatment. *Journal of Counseling & Development*, 76, 94-104.

- Iglesias, A. & Iglesias, A. (2008). Secondary diurnal enuresis treated with hypnosis: A time-series design. *International Journal of Clinical and Experimental Hypnosis*, 56(2), 229-240.
- Inan, M., Tokuc, B., Aydiner, C. Y., Aksu, B., Oner, N., & Basaran, U. N. (2008). Personal characteristics of enuretic children: An epidemiological study from South-East Europe. *Urologia Internationalis*, 81, 47-53.
- Jacobi, C., Morris, L., & de Zwann, M. (2004). An overview of risk factors for anorexia nervosa, bulimia nervosa, and binge eating disorder. In T. Brewerton (Ed.), *Clinical handbook of eating disorders: An integrated approach* (pp. 117-164). New York: Marcel Dekker.
- Jacobsen, T. (1995). Case study: Is selective mutism a manifestation of dissociative identity disorder? *Journal of the American Academy of Child and Adolescent Psychiatry*, 34(7), 863-866.
- Jones, K. D. (2002). Group play therapy with sexually abused preschool children: Group behavior and interventions. *Journal for Specialists in Group Work*, 27(4), 377-389.
- Kalmanowitz, D., & Lloyd, B. (1999). Fragments of art at work: Art therapy in the former Yugoslavia. *The Arts in Psychotherapy*, 26(1), 15-25.
- Katoka, S. H., Stein, B. D., Jaycox, L. H., Wong, M., Escudero, P., et. al. (2003). A school-based mental health program for traumatized Latino immigrant children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 311-318.
- Kearney, A., Sims, K. E., Pursell, C. R., & Tillotson, C. A. (2003). Separation anxiety disorder in young children: A longitudinal and family analysis. *Journal of Clinical Child and Adolescent Psychology*, 32(4), 593-598.
- Kenny, M. (2000). Working with children of divorce and their families. *Psychotherapy*, 37(3), 228-239.
- Kim, J. & Mueller, C. W. (1978). *Factor analysis: Statistical methods and practical issues*. Thousand Oaks, CA: Sage Publications.

- King, N. J., Tonge, B. J., Mullen, P., Myerson, N., Heyne, D., et. al. (2000). Treating sexually abused children with post-traumatic stress symptoms: A randomized clinical trial. *American Academy of Child and Adolescent Psychiatry*, 39, 1347-1355.
- Kinniburgh, K. J., Blaustein, M., Spinazzola, J., & Van der Kolk (2005). Attachment, self-regulation, and competency: A comprehensive intervention framework for children with complex trauma. *Psychiatric Annals*, 35(5), 424-430.
- Landreth, G. L. (2002). *Play therapy: The art of the relationship (2nd ed.)*. New York: Brunner-Routledge.
- Landreth, G. L., Sweeney, D. S., Ray, D. C., Homeyer, L. E., & Glover, G. J. (2005). *Play therapy interventions with children's problems (2nd ed.)*. New York: Jason Aronson.
- Lefevre, M. (2004). Playing with sound: The therapeutic use of music in direct work with children. *Child and Family Social Work*, 9, 333-345.
- Levendosky, A. A., Huth-Bocks, A. C., Semel, M. A., & Shapiro, D. L. (2002). Trauma symptoms in preschool-age children exposed to violence. *Journal of Interpersonal Violence*, 17, 150-164.
- Lieberman, A. F., Van Horn, P., & Ippen, C. G. (2005). Toward evidence-based treatment: Child-parent psychotherapy with preschoolers exposed to marital violence. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44(12), 1241-1249.
- Luby, J. L., Heffelfinger A., Koenig-McNaught, A. L., Brown, K., & Spitznagel, E. (2004). The Preschool Feelings Checklist: A brief and sensitive screening measure for depression in young children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(6), 708-718.

- Lyons-Ruth, K. Melnick, S., Bronfman, E., Sherry, S., & Llanas, L. (2004). Hostile-helpless relational models and disorganized attachment patterns between parents and their young children: Review of research and implications for clinical work. In L. Atkinson & S. Goldberg (Eds.). *Attachment issues in psychopathology and intervention* (pp. 65-94). Mahwah, NJ: Lawrence Erlbaum Associates.
- Mackler, K. (2004). Review of the Trauma Symptom Checklist for Young Children. *Mental Measurements Yearbook, 17*, Retrieved August, 15, 2009, from <http://www.libproxy.uta.edu/2067:2067/ehost/delivery?vid=33&hid=112&sid=8eb62bfc-5c84-4297-a...>
- Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized attachment status: Is frightened/frightening parental behavior the linking mechanism? In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *Attachment in the preschool years: Theory, research, and intervention* (pp. 161-182). Chicago, IL: University of Chicago Press.
- Main, M., & Solomon, J. (1986). Discovery of an insecure-disorganized/disoriented attachment pattern: Procedures, findings, and implications for the classification of behavior. In T. B. Brazelton & M. Yogman (Eds.), *Affective development in infancy* (pp. 95-124). Norwood, NJ: Ablex.
- Machin D, Campbell M, Fayers, P, Pinol A (1997). *Sample size tables for clinical studies*, (2nd ed. pp. 24-25, 168-171). Malden, MA: Blackwell Science.
- Malchoidi, C. A. (1998). *The art therapy sourcebook*. New York: McGraw-Hill.
- March, J. S., Amaya-Jackson, L., Murray, M. C., & Schulte, A. (1998). Cognitive-behavioral psychotherapy for children and adolescents with posttraumatic stress disorder after a single-incident stressor. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 585-593.

- Mayo Foundation for Medical Education and Research (1998-2011). *Infant and toddler health: Child development chart: preschool milestones*. Retrieved March 20, 2011, from www.mayoclinic.com/health/child-dev/MY00136.
- McGuinness, T. M., & Broome, B. (2007). The culture of adversity: Youth in foster care. *Urologic Nursing, 27*(5), 441-442.
- McKnight, T. (2004). Review of Child Sexual Behavior Inventory. *Mental Measurements Yearbook, 14*. Retrieved January, 18, 2010, from, <http://libproxy.uta.edu:2067/ehost/delivery?vid=24&hid=112&sid=8eb62bfc-5c84-4297-a...>
- Measelle, J. R., Ablow, J. C., Cowan, P. A., & Cowan, C. P. (1998). Assessing young children's views of their academic, social, and emotional lives: An evaluation of the self-perception scales of the Berkeley Puppet Interview. *Child Development, 69*(6), 1556-1576.
- Mesman, J., & Koot, H. M. (2000). Child-reported depression and anxiety in preadolescence: I. Associations with parent- and teacher-reported problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(11), 1371-1379.
- Moss, E., Cyr, C., Bureau, J. F., Tarabusy, G. M., & Dubois-Comtois, K. (2005). Stability of attachment during the preschool period. *Developmental Psychology, 41*(5), 773-783.
- Moss, E., & St. Laurent, D. (2001). Attachment at school-age and academic performance. *Developmental Psychology, 32*, 533-541.
- Nader, K., Stuber, M., & Pynoos, R. (1991). Posttraumatic stress reactions in preschool children with catastrophic illness: Assessment needs. *Comprehensive Mental Healthcare, 1*, 223-239.
- Nadkarni, M. (2007). Immediate psychological support for children after a disaster: A concept. [Electronic version]. *Internet Journal of Rescue & Disaster Medicine, 6*(2), 2.
- National Association of Social Workers (2008). *Code of ethics*. Retrieved January 24, 2010, from <http://www.socialworkers.org/pubs/code/code.asp>.

- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.
- O'Connor, K. (2002). The value and use of interpretation in play therapy. *Professional Psychology: Research and Practice*, 33(6), 523-528.
- Ogawa, Y. (2004). Childhood trauma and play therapy intervention for traumatized children. *Journal of Professional Counseling, Practice, Theory, & Research*, 32(1), 19-29.
- Omenson, R. A. (2005). Art at the Astrodome. *School Arts*, 105(3), 6.
- Pelcovitz, D., Van der Kolk, B., Roth, S., Mandel, F., Kaplan, S., & Resick, P. (1997). Development of a criteria set and a structured interview for disorders of extreme stress (SIDES). *Journal of Traumatic Stress*, 10(1), 3-16.
- Phelan, J. (2008). Deciding to relax external controls: A child and youth care framework. *Relational Child and Youth Care Practice*, 21(1), 38-41.
- Prambling, N. (2006). 'The clouds are alive because they fly in the air as if they were birds': A re-analysis of what children say and mean in clinical interviews in the work of Jean Piaget. *European Journal of Psychology of Education*, 21(4), 453-466.
- Puffer, M. K., Greenwald, R., & Elrod, D. E. (1998). A single session EMDR study with twenty traumatized children and adolescents [Electronic version]. *Electronic Journal of Traumatology*, 3, article 6.
- Ramussen, L. A., & Cunningham, C. (1995). Focused play therapy and non-directive play therapy: Can they be integrated? *Journal of Child Sexual Abuse*, 4(1), 1-20.
- Roesler, T. A., Savin, D., & Grosz, C. (1993). Family therapy of extrafamilial sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32(5), 967-970.
- Russ, S. W. & Schafer, E. D. (2006). Affect in fantasy play, emotion in memories, and divergent thinking. *Creativity Research Journal*, 18(3), 347-354.
- Saigh, P. A. (2004). *A structured interview for diagnosing Posttraumatic Stress Disorder: Children's PTSD Inventory*. San Antonio, TX: PsychCorp.

- Saigh, P. A., Yasik, A. E., Oberfield, R. A., Green, B. L., Halamandaris, P. V., Rubenstein, H., et. al., (2000). The Children's PTSD Inventory: Development and reliability. *Journal of Traumatic Stress, 13*(5), 269-381.
- Saxe, G., Chawla, N., Stoddard, F., Kassam-Adams, N., Courtney, D., Cunningham, K., et. al., (2003). Child stress disorders checklist: A measure of ASD and PTSD in children. *Journal of the American Academy of Child & Adolescent Psychiatry, 42*(8), 972-978.
- Saylor, C. F., Swenson, C. C., Reynolds, S. S., & Taylor, M. (1999). The Pediatric Emotional Distress Scale: A brief screening measure for young children exposed to traumatic events. *Journal of Clinical Child Psychology, 28*(1), 70-81.
- Saywitz, K. J., Mannarino, A. P., Berliner, L., & Cohen, J. A. (2000). Treatment for sexually abused children and adolescents. *American Psychologist, 55*(9), 1040-1049.
- Scheeringa, M. S., Peebles, C. D., Cook, C. A., & Zeanah, C. H. (2001). Toward establishing procedural, criterion, and discriminant validity for PTSD in early childhood. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*(1), 52-60.
- Scheeringa, M. S. & Zeanah, C. H. (2001). A relational perspective on PTSD. *Journal of Traumatic Stress, 14*(4), 799-815.
- Scheeringa, M. S. & Zeanah, C. H. (2008). Reconsideration of harm's way: Onsets and comorbidity patterns of disorders in preschool children and their caregivers following Hurricane Katrina. *Journal of Clinical Child and Adolescent Psychology, 37*(3), 508-518.
- Scheeringa, M. S., Zeanah, C. H., Drell, M. J., & Larrieu, J. A. (1995). Two approaches to the diagnosis of posttraumatic stress disorder in infancy and early childhood. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*(2), 191-200.
- Scheeringa, M. S., Zeanah, C. H., Myers, L., & Putnam, F. W. (2003). New findings on alternative criteria for PTSD in preschool children. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*(5), 561-571.

- Scheeringa, M. S., Zeanah, C. H., Myers, L., & Putnam, F. W. (2005). Predictive validity in a prospective follow-up of PTSD in preschool children. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*(9), 899-906.
- Schmidt, U., Tiller, J., Blanchard, M., Andrews, B., & Treasure, J. (1997). Is there a specific trauma precipitating anorexia nervosa? *Psychological Medicine, 27*, 523-530.
- Seja, A. L. & Russ, S. W. (1999). Children's fantasy play and emotional understanding. *Journal of Clinical Child Psychology, 28*(2), 269-277.
- Shackman, J. E., Shackman, A. J., & Pollack, S. D. (2007). Physical abuse amplifies attention to threat and increases anxiety in children. *Emotion, 7*(4), 838-852.
- Shoebriidge, P., & Gowers, S. G. (2000). Parental high concern and adolescent-onset anorexia nervosa. A case-control study to investigate direction of causality. *British Journal of Psychiatry, 176*, 132-137.
- Sklarew, B. H. & Blum, H. P. (2006). Trauma and depression. *International Journal of Psychoanalysis, 87*, 859-861.
- Slater, R. (2007). Attachment: Theoretical development and critique. *Educational Psychology in Practice, 23*(3), 205-219.
- Smith, G. G. & Celano, M. (2000). Revenge of the mutant cockroach: Culturally adapted storytelling in the treatment of a low-income African American boy. *Cultural Diversity and Ethnic Minority Psychology, 6*(2), 220-227.
- Spinnazola, J., Blaustein, M. & Van der Kolk, B. (2005). Posttraumatic stress disorder treatment outcome research: The study of unrepresentative samples? *Journal of Traumatic Stress, 18*(5), 425-436.
- Steele, W. & Raider, M. (2001). *Structured sensory intervention for traumatized children, adolescents, and parents: Strategies to alleviate trauma*. Lewiston, NY: The Edwin Mellen Press.

- Stinnett, T. A. (2004). Review of the Trauma Symptom Checklist for Young Children. *Mental Measurements Yearbook, 17*, Retrieved August, 15, 2009, from <http://www.libproxy.uta.edu/2067:2067/ehost/delivery?vid=33&hid=112&sid=8eb62bfc-5c84-4297-a...>
- Stover, C. S., Van Horn, P., & Lieberman, A. F. (2006). Parental representations in the play of preschool aged witnesses of marital violence. *Journal of Family Violence, 21*, 417-424.
- Streeck-Fischer, A., & Van der Kolk, B. (2000). Down will come baby, cradle and all: Diagnostic and therapeutic implications of chronic trauma on child development. *Australian and New Zealand Journal of Psychiatry, 34*, 903-918.
- Strickler, H. L. (2001). Interaction between family violence and mental retardation. *Mental Retardation, 39*(6), 461-471.
- Strickler, H. L. (2007). *Fundamentals of working with children who have experienced trauma or loss*. Paper for 2008 Association for Play Therapy e-learning center.
- Stronach-Buschel, B. (1990). Trauma, children, and art. *American Journal of Art Therapy, 29*(2), 48-53.
- St. Thomas, B., & Johnson, P. (2002). In their own voices: Play activities and art with traumatised children. *Groupwork, 13*(2), 34-48.
- Tali, I. M., Mark, S., & Yaakov, M. (1999). Nocturnal enuresis as a secondary manifestation of post-traumatic syndrome in child road accident victims. *Ambulatory Child Health, 5*(3), 280-281.
- Tallandini, M. (2004). Aggressive behavior in children's dolls' house play. *Aggressive Behavior, 30*, 504-519.
- Terr, L. (1991). Childhood traumas: An outline and overview. *American Journal of Psychiatry, 148*(1), 10-20.

- Valla, J. P., Bergeron, L., & Smolla, N. (2000). The Dominic-R: A pictorial interview for 6- to 11- year old children. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*(1), 85-93.
- Van der Kolk, B. (2006). Clinical implications of neuroscience research in PTSD. *Annals New York Academy of Sciences, 1071*, 277-293.
- Van der Kolk, B. (2005). Developmental trauma disorder: Toward a rational diagnosis for children with complex trauma histories. *Psychiatric Annals, 35*(5), 401-408.
- Van der Kolk, B. (2002). Posttraumatic therapy in the age of neuroscience. *Psychoanalytic Dialogues, 12*(3), 381-392.
- Van der Kolk, B. (2001). The psychobiology and psychopharmacology of PTSD. *Human Psychopharmacology, 16*, S49-S64.
- Van der Kolk, B. (1998). Trauma and memory. *Psychiatry and Clinical Neurosciences, 52*(supp), S97-S109.
- Van der Kolk, B., & Fisler, R. E. (1994). Childhood abuse and neglect and loss of self-regulation. *Bulletin of the Menninger Clinic, 58*(2), 145-169.
- Van der Kolk, B., Roth, S., Percolvitz, D., Sunday, S., & Spinazzola, J. (2005). Disorders of extreme stress: The empirical foundation of a complex adaptation to trauma. *Journal of Traumatic Stress, 18*(5), 389-399).
- Varkas, T. (1998). Childhood trauma and posttraumatic play: A literature review and case study. *Journal of Analytic Social Work, 5*(3), 29-49.
- Wikstrom, B. M. (2005). Communicating via expressive arts: The natural medium of self-expression for hospitalized children. *Pediatric Nursing, 31*(6), 480-485.
- Zeanah, C. H., Keyes, A., & Settles, L. (2003). Attachment relationship experiences and childhood psychopathology. In J. A. King, C. F. Ferris, & I. I. Lederhendler (Eds.), *Roots of mental illness in children* (pp. 22-30). New York: New York Academy of Sciences.

Zirkel, P. A. (2007). What does the law say? *Teaching Exceptional Children*, 40(1), 74-76.

BIOGRAPHICAL INFORMATION

Heidi Lynne Hartmann Strickler, has been an assistant professor of social work for Texas A & M University – Central Texas for the past four years. She has taught a myriad of courses including Practice I (micro practice), Practice II (macro practice), Social Work and Mental Health, Social Work Research Methods, Social Work Statistics, Eating Disorders, Crisis and Trauma Interventions, Child/Adolescent Mental Health Issues, At Risk Youth, Fun With Social Work Groups/Mezzo Interventions, Addictive Behaviors, Field Seminar I, Field Seminar II, Service Learning, and numerous independent/honors courses on ethics, clinical child/mental health issues, and research issues. She has also been an adjunct professor for The University of Texas at Arlington for the past 8 years and served as the primary field contact for the UTA/MCC social work program. Dr. Strickler previously earned a Bachelor of Arts degree in psychology from Millersville University and a Master of Science degree in Social Work from The University of Texas at Arlington. She is a licensed clinical social worker, a certified eating disorders specialist, a certified trauma and loss specialist in children, and a certified anger resolution therapist. She has maintained a private psychotherapy practice specializing in children, adolescents, eating disorders, and trauma for the past six years. Her current research interests include multiple intelligence, beneficence, childhood trauma, and eating disorders. Following graduation, she will be moving to Missouri to become the program director of the trauma and eating disorder program at Castlewood Treatment Center.