Getting the Picture: A Cartoon-Based Assessment Tool for Complex Trauma in Children

Jennifer A. King

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Getting the Picture: A Cartoon-Based Assessment Tool for Complex Trauma in Children

Abstract
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Results: Part 1, Trauma History, was found to be minimally reliable (a=.632) while Part 2, Symptomatology, was found to be highly reliable (a=.931). Part 1 of the CCTI and Part 1 of the UCLA PTSD-RI were positively and significantly correlated, r=.677, p. Survey data illustrated that while clinicians reported positive experiences using the CCTI, some struggled with Part 2 and did not elicit information from the child on several domains of impairment.

Conclusions: Overall, clinicians experienced the CCTI as useful, comprehensive, developmentally and culturally appropriate, easy to use, and engaging. The results of psychometric analyses indicate that despite the small sample size, the CCTI shows preliminary signs of convergent validity and internal consistency. Issues related to Part 2 (items and response format) warrant revision. Directions for future research include employing a larger sample size and additional testing for reliability and validity.

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Comments
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Getting the Picture: A Cartoon-Based Assessment Tool for Complex Trauma in Children

Jennifer A. King

A DISSERTATION

In

Social Work

Presented to the Faculties of the University of Pennsylvania

In

Partial Fulfillment of the Requirements for the

Degree of Doctor of Social Work

2015

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This dissertation could not have been completed had I not been lent the genius of several very important people. Dr. Phyllis Solomon, my chair and mentor, who inspired me to push my own limits and create a tool, and research project, that is truly the beginning of potentially lifelong work. Dr. Julian Ford, her kindred spirit, whose belief in this work was unwavering and whose expertise and wealth of knowledge regarding complex trauma in children was a constant resource. Dr. Eliana Gil, whose long history of clinical work with abused children helped to guide the development of the CCTI itself. Sarah Boyle, queen of statistical analyses, who guided me as I floundered through SPSS. My husband, Adam King, the artist and illustrator behind Cameron, who not only created the images that make the CCTI so special, but also gave me more support, patience, and love than I ever thought possible.

And lastly, our son, Roscoe Scott Drue King, who was made an honorary committee member in September of 2014.

Thank you, all.
ABSTRACT

GETTING THE PICTURE: A CARTOON-BASED ASSESSMENT TOOL FOR COMPLEX TRAUMA IN CHILDREN

Jennifer A. King, University of Pennsylvania
Dr. Phyllis Solomon, Dissertation Chair, University of Pennsylvania

Objective: To develop a pictorial-based assessment tool, the Cameron Complex Trauma Interview (CCTI), evaluating trauma history and symptomatology in children ages 5 to 11.

Method: 21 participating clinicians (Master’s level or higher) were asked to utilize the CCTI and the UCLA PTSD-RI with one client, ages 5-11, with known exposure to trauma, provide demographic information, scores, and complete the Clinical Utility and Feasibility Survey (CUFS) evaluating the CCTI. Descriptive statistics were performed on the CUFS survey results. In order to gather preliminary psychometric data: performed Cronbach’s alpha to determine internal consistency, and Pearson correlations to assess construct and convergent validity.

Results: Part 1, Trauma History, was found to be minimally reliable ($\alpha=.632$) while Part 2, Symptomatology, was found to be highly reliable ($\alpha=.931$). Part 1 of the CCTI and Part 1 of the UCLA PTSD-RI were positively and significantly correlated, $r=.677$, $p<.001$. Part 2 of the CCTI and Part 2 of the UCLA PTSD-RI were strongly positively and significantly correlated, $r=.810$, $p<.001$. Survey data illustrated that while clinicians reported positive experiences using the CCTI, some struggled with Part 2 and did not elicit information from the child on several domains of impairment.

Conclusions: Overall, clinicians experienced the CCTI as useful, comprehensive, developmentally and culturally appropriate, easy to use, and engaging. The results of psychometric analyses indicate that despite the small sample size, the CCTI shows preliminary signs of convergent validity and internal consistency. Issues related to Part 2 (items and response format) warrant revision. Directions for future research include employing a larger sample size and additional testing for reliability and validity.
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CHAPTER 1: Introduction and Background and Significance

INTRODUCTION

More than 25 years of research has established that exposure to childhood psychological trauma is a nationwide public health epidemic (D’Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012; Felitti et al., 1998; Margolin & Gordis, 2000). Trauma experienced in childhood has been shown to lead to both immediate and life-long physical and mental health impairments (Felitti et al., 1998). When children are exposed to multiple or ongoing traumatic events these impairments can impact nearly every domain of the child’s life. Because of the breadth and specificity of their symptoms, chronically traumatized children present in highly complicated and idiosyncratic ways (Pelcovitz, Van der Kolk, Roth, Mandel, Kaplan, & Resnick, 1997). It is of great importance that the clinician gain both a comprehensive history of exposure to traumatic events and a thorough understanding of the behavioral, emotional, and developmental impact of these events through the assessment process.

The canon of standardized assessment tools available to evaluate chronically traumatized children has several inherent shortcomings. Many trauma history and/or symptomatology tools are structured in a self-administered, self-report format. Chronic or repeated trauma results in deficits in executive functioning, including impaired reading and language skills, and inability to sustain attention and focus (NCTSN, 2003; Praver et al., 2000). Completion of these measures requires skills that traumatized children may not have. Additionally, most measures of child trauma rely heavily on caregiver input. Information from parents or caregivers is undoubtedly helpful, but is not always accurate. Fear of child welfare involvement, the normalization of community violence, and the intergenerational pattern of trauma compound parents’ ability to disclose accurate, truthful information (Stover & Berkowitz, 2005; Van der Kolk, 2005).
Just as there is not a singular diagnosis that encapsulates the totality of symptoms that can be experienced by chronically traumatized children, no single measure exists to evaluate the breadth of these symptoms. While there are many psychometrically sound tools designed to measure the absence or presence of PTSD, using these tools would result in only one piece of the full symptom picture (D’Andrea et al. 2012, van der Kolk et al., 2009). For a comprehensive assessment, clinicians would need to complete a multitude of standardized measures (Courtois & Ford, 2009; NCTSN, 2003). Many of these measures are costly, time-consuming, and require some level of expertise on behalf of the clinician. In a world where managed care mandates brief, time-limited assessment, typically by direct care workers without graduate degrees, a battery of psychological assessment tools is unrealistic and, without financial resources, unavailable as well.

In order to meet the multifaceted, idiosyncratic needs of this vulnerable population, a user-friendly, comprehensive trauma history and symptom tool for alleged or actual child victims that considers both developmental and cognitive impairments, and provides a structure for obtaining the essential information for more appropriate treatment planning would be of tremendous value. The present research aimed to achieve this by developing and testing the Cameron Complex Trauma Interview (CCTI), which assesses both trauma history and the broad range of symptoms experienced by chronically traumatized children. The CCTI is an adaptation of two existing measures: the Structured Interview for Disorders of Extreme Stress (SIDES) and the Trauma Events Screening Inventory for Children (TESI-C). The former is a semi-structured interview designed to evaluate symptoms of complex trauma in adults; the latter is a trauma history interview for use with children. Language was simplified to allow for use with very young, or very developmentally delayed children. Cartoon pictures coincide with each item, to adapt to reading and language deficiencies and to enhance the level of engagement. Taking into consideration the demands of the organizational environment, the CCTI allows clinicians to elicit vital assessment information with one tool, in one session. Thus, the objective of the current
research was to develop an instrument to measure complex trauma in children and to gather preliminary survey data assessing the feasibility and validity of the tool with a population of traumatized children receiving mental health services in a variety of settings. The research questions are as follows: “do clinicians find the CCTI to be a useful, engaging, comprehensive, and developmentally appropriate way to assess for trauma history and symptoms in traumatized children?” and “is there preliminary evidence that the CCTI is a reliable and valid way to measure trauma history and symptoms in traumatized children?”.

BACKGROUND AND SIGNIFICANCE

Extent of the Problem

Each year in the United States, more than three million reports for allegations of child abuse or neglect are made and 1 million of these reports are substantiated (D’Andrea et al., 2012; Putnam, 2006; U.S. Department of Health and Human Services Administration on Children, Youth and Families, 2005). The financial costs of child abuse and maltreatment are staggering. The National Institute of Justice estimates the combined costs of mental health care, social services, medical care, and police intervention are $4,379 per incident of childhood abuse (U.S. Department of Health and Human Services Administration on Children, Youth and Families, 2005). The National Center for Injury Prevention and Control found the total lifetime economic burden that results from new cases of both fatal and nonfatal child maltreatment in the United States is approximately $124 billion (Fang, Brown, Florence, & Mercy, 2012).

Emotional and health costs are equally substantial. The Adverse Child Experiences (ACE) study, by Kaiser Permanente and Centers for Disease Control and Prevention, surveyed more than 17,000 health maintenance organization (HMO) members regarding their trauma exposure in childhood, i.e. “adverse childhood experiences,” and their health outcomes in adulthood (Felitti et al., 1998). Results indicated 30.1% had experienced physical abuse, 19.9%
experienced sexual abuse, 23.5% were exposed to family alcohol abuse, 18.8% were exposed to mental illness, 12.5% were exposed to domestic violence, and 4.9% were exposed to family drug abuse (Felitti et al., 1998). In sum, more than two-thirds of those surveyed had incurred one or more traumatic experiences in childhood. The research showed a significant overlap between exposure to traumatic events, establishing that childhood adverse experiences do not occur in isolation. For people who reported any single category of exposure, the probability of exposure to any additional category ranged from 65-93%. The probability of two or more additional exposures ranged from 40-70% (Felitti et al., 1998).

The ACE study also confirmed the link between adverse experiences in childhood and major health issues later in life. A strong dose-response relationship was shown to exist between the breadth of exposure to abuse or household dysfunction and multiple risk factors for disease conditions like heart disease, cancer, chronic lung disease, and liver disease: the more adverse experiences in childhood, the greater the likelihood of multiple health issues in adulthood (Feletti et al., 1998). A significant relationship is evident between adverse childhood experiences and health risk behaviors such as suicide attempts, drug abuse, sexual promiscuity, and obesity. Essentially, the ACE research established that childhood trauma is strongly linked to the leading causes of death in the United States. According to Felitti et al. (1998), “Insofar as abuse and other potentially damaging childhood experiences contribute to the development of these risk factors, then these childhood exposures should be recognized as the basic causes of morbidity and mortality in adult life” (Felitti et al., 1998, p. 246).

These results suggest that childhood traumatic experiences are vastly more common, and more damaging, than previously recognized. Notably, the sample used in the ACE study was comprised of middle-aged, college-educated, Caucasian adult men and women. Emerging research has established that the likelihood of multiple, co-occurring experiences of trauma is alarmingly high for children, and even higher for ethnic minority youth living in poverty. The
first large-scale study exploring this phenomenon found that more than 50% of their sample experienced two or more types of violent trauma in a single year, and among youth who had been victimized, the average number of victimizations was three (Finkelhor, Ormrod, & Turner, 2007). Following this, the National Survey of Children's Exposure to Violence aimed to obtain 1-year and lifetime prevalence rates of a wide range of childhood victimizations in a nationally representative sample of 4549 children aged 0 to 17 years. Results indicated a clear majority (60%) of the sample had experienced at least 1 direct or witnessed victimization in the previous year. More than one third (38.7%) were exposed to 2 or more direct victimizations. One in 10 children had 5 or more direct victimizations during the study year (Finkelhor, Turner, Ormrod, & Hamby, 2009). Exposure to domestic violence appears to be especially predictive of exposure to additional sources of traumatic stress. Lieberman and Knorr (2007) found that children who witnessed domestic violence in their homes were 15 times more likely to be abused, compared to the national average, and found a 30 to 70% overlap between domestic violence and child physical or sexual abuse, depending on the sample.

_Trauma vs. Complex Trauma: Definitions_

Traumatic events have been defined as those which are outside the realm of ordinary human experience, result in loss of control over one’s personal safety, present real or perceived danger, and overwhelm the ability of human adaptations to life (Herman, 1992; Courtois & Gold, 2009). Traumatic events and experiences have been categorized into two main types (Terr, 1991). Type I traumatic events are single-incident, unexpected events or emergencies such as natural disasters, accidents, and illnesses. With this type of traumatic event, causation is random and no one person is directly responsible. Type II traumatic events, however, can be repetitive or ongoing, imply responsibility, and often involve premeditation, planning, and deliberateness. This category includes physical and sexual violence, emotional and verbal abuse, neglect, bullying, acts of terrorism, and combat (Courtois & Ford, 2009).
The majority of people who report exposure to trauma have experienced multiple traumatic events, or Type II traumas (Felitti et al., 1998, Cloitre, Courtois, Charuvastra, Carapezza, Stolbach, & Green, 2011). Studies of both child and adult populations in the last 25 years have established that for most trauma-exposed individuals, traumatic stress experienced in childhood does not occur in isolation and instead is characterized by co-occurring, typically chronic, types of victimization and other adverse experiences (Spinazzola et al., 2005; van der Kolk, 2005). Complex psychological trauma is defined as resulting from exposure to stressors that are repetitive or prolonged, involve harm or abandonment by caregivers (Type II), and occur at developmentally vulnerable times in the victim’s life (i.e. childhood or adolescence) when vital periods of brain development rapidly occur (Courtois & Ford, 2009). Complex trauma was operationalized as Disorders for Extreme Stress Not Otherwise Specified (DESNOS) for the DSM-IV field trials, and was marked by alterations in six areas of functioning: regulation of affect, attention or consciousness, self-perception, attachment to the perpetrator, relations with others, somatization, and systems of meaning (Pelcovitz, Van der Kolk, Roth, Mandel, Kaplan, & Resnick, 1997). Although a complex trauma or DESNOS diagnosis was not included in the DSM-IV, the result of the field trials was the inclusion of complex trauma symptoms as the "associated features" of Posttraumatic Stress Disorder (PTSD) (American Psychiatric Association, 2000, p. 465).

Posttraumatic stress disorder is marked by a set of characteristic symptoms that can develop following either direct or indirect exposure to a traumatic stressor. According to the Diagnostic and Statistical Manual of Mental Disorders (5th ed., American Psychiatric Association, 2013) to be diagnosed with PTSD, one must experience a tetrad of symptoms: re-experiencing of the traumatic event, avoidance and/or numbing of responsiveness to stimuli related to the traumatic event, increased arousal not present prior to the traumatic event, and negative cognitions and/or mood following the traumatic event. Complex trauma in childhood is
associated with enduring symptomatology that incorporates aspects of, but also extends beyond, Posttraumatic Stress Disorder (PTSD). The knowledge that there is a distinct difference between adult onset PTSD and the effects of interpersonal violence on children led to the establishment of the National Child Traumatic Stress Network (NCTSN) in 2001, which aimed to explore complex trauma phenomena and raise the standard of care for this population of children. The NCTSN (2003) has identified seven primary domains of impairment observed in children exposed to complex trauma: attachment, biology, affect regulation, dissociation, behavioral regulation, cognition, and self-concept. Table 1 presents associated symptoms for each domain of impairment.

Table 1. Domains of impairment and associated symptoms of complex trauma

<table>
<thead>
<tr>
<th>Domain</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>• Uncertainty about the reliability of the world&lt;br&gt;• Problems with boundaries&lt;br&gt;• Distrust and suspiciousness</td>
</tr>
<tr>
<td>Biology</td>
<td>• Sensorimotor developmental problems&lt;br&gt;• Somatization&lt;br&gt;• Increased medical problems</td>
</tr>
<tr>
<td>Affect Regulation</td>
<td>• Difficulty describing internal experience&lt;br&gt;• Difficulty communicating wants/needs&lt;br&gt;• Difficulty with regulating emotions</td>
</tr>
<tr>
<td>Dissociation</td>
<td>• Alterations in states of consciousness&lt;br&gt;• Amnesia&lt;br&gt;• Depersonalization and derealization</td>
</tr>
<tr>
<td>Behavioral Regulation</td>
<td>• Impulse control problems&lt;br&gt;• Self-destructive behavior&lt;br&gt;• Aggression/oppositional behaviors</td>
</tr>
<tr>
<td>Cognition</td>
<td>• Learning difficulties&lt;br&gt;• Problems with language development&lt;br&gt;• Difficulties in attention regulation</td>
</tr>
</tbody>
</table>
### Self-Concept

- Lack of a continuous, predictable self
- Low self-esteem
- Guilt and shame

Source: Adapted from NCTSN (2003)

### Diagnostic Issues

Both epidemiological and clinical studies of trauma exposure and symptoms have established that the extent of mental health difficulties and symptomatology increases linearly with the extent of one’s victimization (Cloitre et al., 2009; D’Andrea et al., 2012; O’Neill et al., 2010). Several studies demonstrate a linear relationship between cumulative childhood trauma and both symptom complexity and symptom severity (Briere, Kaltman, & Green, 2008; Cloitre et al., 2009; O’Neill et al., 2010). Not only is a child who has been exposed to multiple traumas more likely to experience greater severity of symptoms and more numerous symptoms, he or she has a greater likelihood of experiencing these symptoms simultaneously.

Because of this complicated symptom picture, the current diagnostic system and, frequently, the therapeutic interventions resulting from it fail chronically traumatized children in several ways. Chronically traumatized children receive no trauma-related diagnosis, inaccurate diagnoses, or inadequate diagnoses at alarming rates (van der Kolk et al., 2009). A survey of 1,699 children receiving trauma-focused treatment across 25 network sites of the NCTSN showed that the vast majority—78%—were exposed to multiple and/or prolonged interpersonal trauma. Less than 25% of these children met diagnostic criteria for PTSD (Spinazzola et al., 2005).

Analyses of two large databases confirm that many children exposed to trauma are unlikely to fit diagnostic criteria for PTSD (van der Kolk et al., 2009). Data from the Child and Adolescent Needs and Strengths (CANS) dataset of screening of 7,668 foster children in Illinois showed that nearly 95% of children in the Illinois child welfare system who have been identified as having clinically significant trauma-related symptoms did not qualify for a diagnosis of PTSD.
(van der Kolk et al., 2009). As such, many children with complex trauma-related symptoms receive other diagnoses. Analysis of data from the Chicago Child Trauma Center found that children who experienced ongoing trauma in combination with inadequate caregiving systems were 1.5 times more likely than other trauma-exposed children to meet criteria for non-trauma-related diagnoses (van der Kolk et al., 2009). Cook et al. (2005) asserted that children exposed to ongoing maltreatment often fit DSM-IV criteria for major depressive disorder, attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), conduct disorder, anxiety disorders, eating disorders, sleep disorders, communication disorders, separation anxiety disorder, or reactive attachment disorder. Many children receive psychopharmacological interventions based on these diagnoses. However, psychotropic medications prescribed for inaccurate diagnoses lead to an increase in symptoms rather than symptom alleviation (van der Kolk et al., 2009). In order to establish treatment goals and interventions that can alleviate the symptoms of children in this extremely vulnerable population, one must begin with a comprehensive, developmentally-appropriate, individualized assessment.

Assessing Complex Trauma in Young Children

Although details may vary according to theoretical perspective, definitions of psychological assessment refer to both assessment processes, including generating and testing hypotheses, case formulation, decision making, and integration of information, and assessment measures, including the use of tests, questionnaires, observations, and other methods of gathering data. In the present context, both assessment processes and assessment measures are used to gather pertinent information about a child and to develop appropriate interventions (Mash & Hunsley, 2005).

The primary function of psychological assessment is to inform treatment. This is especially significant for those who present with complex trauma, as the variety of potential
symptoms may be significant and the ability of the child to articulate these symptoms may be lacking. Without a structured comprehensive assessment, the clinician may inadvertently miss important symptoms, leading to inadequate or incomplete treatment (Courtois & Ford, 2009). In their publication outlining guidelines for the treatment of child physical and sexual abuse, Saunders, Berliner, and Hanson (2003) stated that the likelihood of successful outcomes is substantially enhanced when interventions are matched to specific problems discerned through appropriate assessment. Mismatching treatment to problem results is a waste of resources, and can lead to prolonged suffering and deterioration in the client. A comprehensive assessment will determine whether an immediate clinical response is indicated, as well as what specific treatment modalities might be most helpful (Lanktree & Briere, 2008).

Collateral information from caregivers, teachers, the court system, and significant others is necessary to obtain as well as highly valuable in informing treatment with traumatized children. However, gaining objective information can be difficult. In their review of violence exposure and trauma symptom measures available for use with young children, Stover and Berkowitz (2005) highlight the complexity of involving caretakers in the assessment of the child. These authors found that there is a high correlation between parental trauma-related symptoms and those of their young children (ages 6 and younger); parental anxiety is frequently transmitted from the caretaker to the child. In other cases, parents may be unaware that a child has experienced a traumatic event and, once they learn of it, are likely to underestimate the impact it may have on the child (Stover & Berkowitz, 2005). Clinicians must not underestimate the importance of obtaining information directly from the individual child, as children as young as 4 can provide substantial amounts of information on their subjective trauma experience (Lamb, Sternberg, Orbach Esplin, Stewart, & Michell, 2003).

A comprehensive trauma evaluation should assess both complex traumatic exposures and outcomes and is accompanied by a thorough psychological evaluation of symptoms and history.
Because complex trauma outcomes vary greatly, assessment must address a wide range of symptoms, including posttraumatic stress, cognitive disturbance, mood disturbance, somatization, identity disturbance, difficulties in affect regulation, interpersonal difficulties, dissociation, and tension reduction activities (Courtois & Ford, 2009). The NCTSN (2003) identified that clinicians must evaluate adaptations to complex trauma in the seven domains described earlier: biology, affect regulation, dissociation, behavioral management, cognition, and self-perception. There is no one tool that would allow clinicians to gain all of this information. Courtois and Ford (2009) assert that in addition to evaluating PTSD-related symptoms, standardized self-report questionnaires assessing externalizing problems, such as aggression and hyperactivity, and internalizing problems, such as anxiety and depression, should also be utilized. The NCTSN recommends performing a battery of standardized measures, in addition to the clinical interview, as part of a typical trauma evaluation.

**Existing Standardized Measures and Traumatized Children: Challenges**

While standardized measures are omnipresent in child mental health research, they are essentially absent from clinical practice (Ford et al., 2013; Jensen-Doss & Hawley, 2010). Surveys of practicing psychologists suggest that unstructured clinical interviews are the most common and, often, the only assessment method used (Jensen-Doss & Hawley, 2010). Several studies have found that clinicians cite practical concerns about using research measures, specifically the added paperwork burden and the relevance of the measures to the populations they work with (Jensen-Doss & Hawley, 2010). Clinicians report that standardized measurement tools tend to be costly, time-consuming, and require skilled professional input, all of which make their use difficult for those working in community mental health agencies (Ford et al., 2013). Many clinicians lack the financial resources, time, and training required to administer the full battery of recommended instruments in assessing symptoms and history of trauma in children.
Numerous limitations of current child and adolescent trauma measures result from the fact that they are formatted similarly to adult interviews. Despite efforts to adapt language and conceptual complexity to the developmental levels of children, additional considerations need to be taken into account such as short attention span, difficulty with abstract thinking, and varying verbal abilities in children that cannot be easily addressed in verbally driven interviews (Ernst, Cookus, & Moravec, 2000; Ridenour, Minnes, Maldonado-Molina, Reynolds, Tarter, & Clark, 2011). These issues ring true for clinicians. In a study of child mental health clinicians’ attitudes about the use of standardized measures, Garland, Kruse, and Aarons (2003) surveyed clinicians from a large children’s public mental health system regarding their attitudes about the use of standardized measures, and found that many reported concerns that their clients’ limited literacy might render the scores invalid as the tools are very difficult for youth to understand. Difficulties with reading, language, and higher order thinking are especially potent for chronically traumatized youth. Cook et al. (2005) note that children exposed to abuse, neglect, or other violence demonstrate deficits in attention, abstract reasoning, and executive function skills. A history of maltreatment is associated with delays in expressive and receptive language development as well as deficits in overall IQ (NCTSN, 2003). Consequently, the validity of such measures are questionable when used with a chronically traumatized population.

Use of Pictorial Instruments with Children

The efficacy of a written assessment tool depends on the ability of respondents to comprehend questions and respond appropriately. This is problematic for populations who have low levels of literacy and language difficulties (Leiner, Rescorla, Medina, Blanc, & Ortiz, 2010). A way to make assessment procedures more accessible to those with low literacy levels is to add pictorial descriptions to items. The pictorial approach has been used to assess the developmental stages of children, to diagnose DSM III and DSM-IV TR disorders, as a projective tool, and to measure cognitive, emotional, and behavioral constructs (Dubi & Schneider, 2009; Ernst et al.,
Getting the Picture

2000; Leiner et al., 2010; Valla et al., 2000). Pictorial instruments add a visual dimension to the assessment process that is developmentally appropriate and greatly improves participation on behalf of the child (Dubi & Schneider, 2009; Ernst et al., 2000). This format is becoming more common and more widespread in the field of child mental health and child psychopathology. The Child Behavior Checklist (CBCL), a widely used, standardized instrument inquiring about behavioral problems in children, is now also available in a pictorial format. In designing the Pictorial Child Behavior Checklist (PCBCL), Leiner, Rescorla, Medina, Blanc, and Ortiz (2010) chose to add pictures along side the original CBCL item wording in order to make it more effective and appealing for both parents and children with low literacy levels.

A review of multidisciplinary literature, including trauma theory, neuroscience, and art/expressive therapies, offer several explanations as to why a pictorial format may be useful in assessing traumatized children. Trauma is a sensory experience, not a solely cognitive experience. It is for this reason that traumatic memories are encoded as images (Gerteisen, 2008; Klorer, 2005). Ongoing childhood trauma can lead to deficient hemispheric integration. Right hemisphere activity has been shown to be important in traumatic memory storage and processing and that part of the brain that is nonverbal (Cordon, Pipe, Sayfan, Melinder, & Goodman, 2004; Gerteisen, 2008; Klorer, 2005). Thus, it makes sense to utilize an assessment approach that incorporates nonverbal methodology. Ernst et al. (2000) assert that because recognition memory is usually better than recall memory, even for the non-traumatized, the use of visual cues are likely to enhance the reliability and validity of the information elicited from the child. As noted above, sustaining attention and focus tends to be difficult for traumatized children. Valla et al. (2000) assert the pictorial format is helpful in improving comprehension, stimulating attention, and focusing the interest of children. In addition, the use of pictures avoids having to rely solely on the vocabulary of the child (Valla et al., 2000). Traumatized children struggle to verbalize their internal states, and name their various feelings. The use of pictures allows specific activities
to be depicted concretely, which is important considering abstract thought is not gained until adolescence (Harter & Pike, 1984).

Despite evidence that incorporating pictures could control for some of the variables that make assessing traumatized children so difficult, pictorial methodology has not been used to assess trauma history and symptoms in chronically traumatized children. It has, however, been used to measure the constructs of anxiety and fear in young children (Dubi & Schneider, 2009; Ernst et al., 1994; Valla et al., 2000). One such measure is the Koala Fear Questionnaire (KFQ): a standardized pictorial instrument for assessing fears and fearfulness in children between the ages of 4 and 12. It consists of 31 potentially fear-provoking stimuli and situations that are illustrated with pictures. Children then rate the intensity of their fear by using a visual scale depicting koala bears expressing various degrees of fear (Muris, Meesters, Mayer, Bogie, Luijten, Geelbelen, Bessems, & Smit, 2003). The KFQ has shown to be reliable, valid, and internally consistent with both clinical and non-clinical populations comprised of children 4-12. One noteworthy measure, the Angie/Andy Cartoon Trauma Scales (ACTS) (Praver, DiGiuseppe, Pelcovitz, Mandel, & Gaines, 2000), employed the pictorial methodology to capture the inner experiences of children ages 6 to 11 exposed to repeated or chronic trauma. The ACTS demonstrated high internal consistency as well as promising construct and concurrent validity (Praver et al., 2000). However, the measure was comprised of 110-items and took approximately 45 minutes to administer, a lengthy process for children likely to have attentional deficits. It also did not measure trauma history, but only symptoms related to trauma. The ACTS is no longer in print.

*The Cameron Complex Trauma Interview (CCTI)*

The Cameron Complex Trauma Interview (CCTI) is a pictorial-based, two-part semi-structured interview used to evaluate comprehensive trauma history as well as the presence and
severity of symptoms related to complex trauma. It is an adaptation of two existing, psychometrically sound, yet verbally driven measures: The Traumatic Events Screening Inventory-Child Version (TESI-C; Ford & Rogers, 1997) and the Structured Interview for Disorders of Extreme Stress-Adolescent Version (SIDES-A; Pelcovitz, 2004). Two additional measures, the Developmental Trauma Disorder Structured Interview for Children (DTDSI-C; Ford, Spinazzola, van der Kolk, & Grasso, 2014), and the UCLA PTSD Reaction Index DSM-5 version (PTSD-RI; Pynoos & Steinberg, 2013) were also reviewed as part of the development process. The DTDSI-C has established construct validity, discriminate validity, internal consistency, and holds Kappa inter-rater reliability at .70 and above (Ford, Spinazzola, van der Kolk, & Grasso, 2014). Psychometric information regarding previous versions of the PTSD-RI can be found in the Measures section.

The Traumatic Events Screening Inventory-Child version (TESI-C) is a structured clinical interview measure containing 24-items that inquire about current and previous exposure to injuries, hospitalizations, domestic violence, community violence, disasters, accidents, physical abuse, and sexual abuse (Strand et al., 2005). It is a revised version of the TESI, which has been shown to have strong psychometric properties. Ford et al. (2000) report Kappa inter-rater reliability ranging from .73 to 1.00 and test-retest reliability over 2-4 months ranging from .50-.70. Criterion validity has been established, and convergent validity ranges from .64 to .79 (Ford et al., 2000).

The SIDES-A is the adolescent version of the SIDES, a semi-structured interview designed to measure the presence of the following symptom clusters related to trauma exposure in adolescents: problems with self-regulation, problems with information processing, somatic functioning, problems with personal identity, problems in attachment to the perpetrator, problems in interpersonal relationships, and alterations in systems of meaning (Pelcovitz, van der Kolk, Roth, Mandel, Kaplan, 1997). The adolescent version is currently in draft form, so has not yet
been empirically validated. The original SIDES has proven to be a reliable and valid instrument to assess for the alterations in functioning that result from exposure to extreme or repeated traumatic stress: inter-rater reliability is .81, internal consistency ranges from .53 to .96, construct and divergent validity have been established through correlations with other instruments.

The CCTI aims to fill the large gap in the literature by employing a pictorial based format, and using developmentally appropriate language, to elicit information about trauma history as well as symptomatology related to chronic or complex trauma in children ages 5 through 11. The remaining sections outline the development of the tool, as well as preliminary testing to establish feasibility and validity of the tool with a population of traumatized children receiving mental health services in a variety of treatment settings.
Chapter 2: METHODS

The methodology of the current research occurred in two phases: development of the CCTI and pilot testing of the CCTI by Master’s and Doctoral level clinicians treating traumatized children. Two hypothesis were tested:

1. Clinicians would report experiencing the CCTI as useful, engaging, comprehensive, easy to use, and developmentally and culturally appropriate for their client population.

2. The CCTI would be found to hold some level of validity and reliability.

Phase 1: Development of the CCTI

The development of the CCTI began with close examination of all items on the SIDES-A, TESI-C, DTDSI-C, and PTSD-RI by this researcher. Any irrelevant or age inappropriate items were eliminated. For Part 1—trauma history—remaining TESI-C items were reviewed and categorized so as to ensure that there were items eliciting information regarding eight types of traumatic stress identified by the National Child Traumatic Stress Network (NCTSN): community violence, domestic violence, medical trauma, natural disasters, neglect, physical abuse, sexual abuse, and traumatic loss. For Part 2—Symptomatology—remaining SIDES-A, DTD-SI, and PTSD-RI items were reviewed and categorized to ensure the measures inquired about post-traumatic stress symptoms as well as each domain of impairment identified by the NCTSN: attachment, biology, affect regulation, dissociation, behavioral regulation, cognition, and self-concept. Language of the items chosen for both parts 1 and 2 were adapted by this researcher based on her clinical experience with young traumatized children, to promote comprehension by children as young as 5.

The full, adapted item list was submitted to two experts in the area of child trauma for review. One expert, a member of the dissertation committee, helped to prepare the NCTSN’s
White Paper on Complex Trauma in Children and Adolescents (2003). The other has more than 40 years of clinical experience working with traumatized children. The experts were asked to provide narrative feedback on each item, as well as any that stood out as possibly being problematic. Revisions were made based on this feedback.

Coinciding cartoon pictures for each item were designed by this researcher, in collaboration with the illustrator, a designer. The majority of the pictures feature Cameron, a gender-neutral puppy designed by this researcher and the illustrator. The choice of an animal character rather than a human one is both significant and intentional. Research has established that children identify with animal figures as much if not more than human figures in stories and pictures and find a greater freedom of personal expression when viewing animal figures (Bills, 1950). For this reason, researchers employed tests that use animal characters as opposed to human ones for children (Bills, 1950; Boyd & Mandler, 1955). The presence of animals in a therapeutic context has been shown to reduce anxiety in children. Specifically, it has been established that children’s blood pressure decreases in the company of a dog that appears friendly (Melson & Melson, 2009). Treatment models addressing various mental health issues in children have been built around dog characters, such as the Super Puppy series developed by J. Garry Mitchell. Thus, a friendly-appearing puppy was chosen as Cameron, the main character for the CCTI.

The illustrator also created a visual Likert scale, a progression of Cameron’s level of distress shown via facial expression, utilized in part 2. This 4-point scale is based on the one used in the Koala Fear Questionnaire (KFQ), which established the validity of visual scales (Muris et al., 2003). The pictures, their coinciding items, and the visual Likert scale were submitted to four reviewers: the two experts listed above, an expert in quantitative research methods, and a child between the ages of 5 and 12 who was in treatment with this researcher. The experts were asked to review each picture and its corresponding item language to evaluate for developmental
appropriateness and goodness-of-fit with the construct being measured by each item. The child in
treatment was shown the pictures only and asked to describe what was happening in each; the
researcher then showed the child the corresponding item language and elicited feedback.
Revisions were made to five pictures that were problematic to the reviewers based on their
collective feedback. Pictures were then resubmitted to the reviewers for feedback; no additional
revisions were required. All were then asked to evaluate the visual Likert scale by reviewing the
description of a level of distress and its corresponding image (points) on the scale and providing
feedback on each. No revisions were made to the Likert scale, as all feedback was positive.

Analysis

The procedures outlined above allowed for objective expert review and subsequent
revision of both parts one and two of the CCTI. The finalized version of the CCTI, based on this,
holds both face and content validity. Agreement among experts regarding item construction
established face and content validity in both the SIDES and SIDES-A measures (Pelcovitz et al.,
1997), as well as other measures of child trauma during their development.

Phase 2: Evaluation

Measures

UCLA PTSD Reaction Index—DSM 5 Version

The UCLA PTSD Reaction Index (PTSD-RI) (Steinberg et al., 2004) is a widely used
and psychometrically sound trauma measure for use with children and adolescents. The updated
DSM-V version of the PTSD-RI is the first standardized child trauma measure to be adapted to
include the expanded DSM-V diagnostic criteria for PTSD. It is comprised of three parts: a
clinician administered lifetime trauma history profile section, a self-report trauma history section,
and a self-report post-traumatic stress symptomatology section expanded from 22 to 31 items (Pynoos & Steinberg, 2013).

Successive versions of the UCLA PTSD-RI have been psychometrically studied and found to be valid across versions: numerous studies have found consistently higher scores among traumatized samples compared with control subjects (Steinberg et al., 2004). It has good convergent validity: .70 in comparison with the PTSD Module of the Schedule for Affective Disorders and Schizophrenia for School-Age Children. Test-retest reliability has ranged from good to excellent, and one study reported an intra-class correlation coefficient of 0.93 for adolescents tested initially and again after 7 days (Steinberg et al., 2004).

Cameron Complex Trauma Interview

The Cameron Complex Trauma Interview (CCTI), a two-part pictorial based assessment of trauma history and related symptomatology in children, was designed and developed by this researcher, with the aid of three experts, using the methods described above. See Phase 1: Development

SAMPLE AND RECRUITMENT

After IRB approval, Master’s and/or doctoral level clinicians providing mental health, counseling, or social work services to children were invited to participate in the evaluation phase using a purposeful, snowball sampling approach. Master’s level child therapists at the three sites of the Family Practice and Counseling Network in Philadelphia (the agency where this researcher is employed), as well as those at the Gil Institute for Trauma Recovery and Education in Washington D.C., a renowned child sexual abuse treatment program were asked to participate. These clinicians were encouraged to invite any colleagues fitting the description above to participate, as well. Students in the DSW program at the University of Pennsylvania who have experience working in the area of child mental health were asked to participate and were also
encouraged to recruit clinicians to participate. While this initial recruitment effort resulted in more than 40 clinicians expressing interest in participation, only 10 were able to complete the research, largely due to either caseload or administrative issues. This resulted in a second recruitment effort, conducted by this researcher posting information about the research in a group for child trauma therapists on LinkedIn, a professional networking website, and asking any interested Master’s level clinicians to contact the researcher. This brought an additional 30 potential participants. Several of these participants were deemed ineligible due to being Master’s level interns as opposed to holding Master’s degrees. Again, numerous participants ran into issues while attempting to complete their part of the research. The aim was to have at least 25 clinicians engage in this research. In the end, 21 participants completed the research.

Participating clinicians received a copy of the CCTI, the CCTI Instruction Manual, and a copy of the PTSD-RI DSM 5 version, as well as a link to the Surveygizmo site, all via e-mail. The Surveygizmo site contained the electronic consent form described in the Human Subjects section, as well as the areas for data submission and the Clinical Utility and Feasibility Survey, described below. The CCTI Instruction Manual, based on the SIDES-A Administration Guide (Pelcovitz, 2004), provides clarification of questions, key points of questions, and tips to aid in asking questions. Probes are provided, although it was made clear that because the CCTI is a semi-structured interview, the clinicians are encouraged to rephrase probes, use their own personal style, or provide examples if they believe it would help them in eliciting information. A copy of the CCTI Instruction Manual can be found in the Appendix.

Participating clinicians were asked to administer both the PTSD-RI and CCTI, in that order, with new client, ages 5 to 11, with a history of exposure to multiple types of traumatic events, specifically interpersonal types of trauma, as indicated by referral information, clinical assessment data, or information received from parent/guardian. While the PTSD-RI contains a clinician administered lifetime trauma history profile section that can be completed with a
caregiver, participants were not asked to complete this section as the current study is interested only in the child self-report data. Instead, they were asked to complete the self-report section evaluating trauma history—heretofore referred to as Part One of the UCLA PTSD-RI—and the self-report section evaluating symptomatology—heretofore referred to as Part Two of the UCLA PTSD-RI. Upon completion of the tools, clinicians then completed the Clinical Utility and Feasibility Survey (see Appendix for survey), described in detail below, online at the SurveyGizmo site. They also completed brief demographic questionnaires on themselves and the participating child, indicated on a short list the specific type of trauma they learned about which led them to choose that child for the trial and input overall scores from the CCTI and the PTSD-RI online at the SurveyGizmo site.

This data, responses on parts one and two of each tool, was provided to the researcher via the Surveygizmo site. It was the sole data collection point in this research. The clinician was not asked to provide any sensitive personal information about him or herself. Demographic data on both the clinician (age, gender, years in practice, level of schooling, practice setting) and the child (age, gender, educational level, current diagnosis) was provided, but no identifiers were used.

The Clinical Utility and Feasibility Survey, developed by this researcher, is a 3-part survey that aims to measure the comprehensiveness and usefulness of information obtained in the trial, the extent to which information was obtained on each of the domains of impairment outlined by the NCTSN, and the perceived strengths and weaknesses of the tool. Part one employs a 5-point Likert Scale (Strongly Disagree, Disagree, Not Applicable, Agree, Strongly Agree) and asks the clinician the degree to which they agree or disagree with 15 statements evaluating overall ease of use, perceived level of child engagement, perceived comprehensiveness of types of trauma assessed, perceived developmental and cultural appropriateness, and overall usefulness of the tool. There are three statements per category; examples include “The format of the tool is easy to understand and follow” (ease of use), “The child required redirection throughout the assessment”
(level of child engagement), “The tool assessed for all possible types of child trauma” (comprehensiveness of types of trauma assessed).

Part two of the evaluation asks clinicians to rank the amount of information they gleaned on the 7 domains of impairment commonly displayed by children impacted by complex trauma: attachment, biology, affect regulation, dissociation, behavioral regulation, cognition, and self-concept (NCTSN, 2003). A 3-point Likert scale (None, Minimal, Comprehensive) was utilized to achieve this.

In part three, clinicians were asked to provide feedback on the strengths and weaknesses of the CCTI. Clinicians indicated, by number, the individual items that stood out to them as having worked especially well or especially poorly during their trial of the tool. They had the option to suggest, in narrative form, ways to revise individual items or ways to improve the overall measure itself. The Survey ended with an optional section for narrative response regarding any additional feedback they wanted to provide.

**ANALYSIS**

*Survey Data*

Descriptive statistics were performed on clinicians’ demographic information (age, gender, years in practice, level of schooling, practice setting) and the participating children’s demographic information (age, gender, educational level, current diagnosis). Frequencies and measure of central tendency were computed for parts 1 and 2 of the CUFS survey results. In addition, measures of central tendency were performed on the 5 subscales comprising part 1: overall ease of use, perceived level of child engagement, perceived comprehensiveness of types of trauma assessed, perceived developmental and cultural appropriateness, and overall usefulness of the tool. It was anticipated that there would be a high degree of agreement among participating clinicians, with regard to overall survey scores as well scores on parts 1 and 2.
Data from part 3 of the survey was reviewed and coded by this researcher. The code list was reviewed and topics, themes, and items that emerged multiple times were used to create a list of collapsed codes. The collapsed list was reviewed and concepts that described similar phenomenon were grouped into categories.

_CCTI Preliminary Psychometric Data_

Despite the small sample size, measures of internal consistency and validity were performed. Internal consistency was examined by computing coefficient alpha for parts 1 and 2 of the CCTI. The relationship between parts 1 and 2 of the CCTI was explored using Pearson correlations, in order to examine construct validity, as research supports the fact that traumatic symptoms related to complex trauma increase linearly with exposure to traumatic events (Pelcovitz et al., 1997). Pearson correlations were performed on parts 1 and 2 of the PTSD-RI; these were compared with the CCTI correlations in order to explore convergent validity. Cohen’s Kappa was calculated to examine the level of agreement for each psychological trauma type measured by both the CCTI and the PTSD-RI. Although traditionally utilized as a measure of reliability, Kappa calculations were chosen as an additional measure of convergent validity, as Kappa is a more stringent criterion for judging agreement than either correlations or percent agreement.

_Human Subjects Protections_

Consent

The consent of each participating clinician was required for this study. A copy of the consent form can be found in the Appendix. It was completed via the online information sent to them. The consent form explained that participation is voluntary. It explicitly stated that the assessment tool was to be used in accordance with practice standards and their respective agency’s policies. It outlined the purpose of the study, what will be required by the clinician,
alternatives to participation, benefits and risks, and information regarding confidentiality. Benefits included continued use of the tool, should they find it useful. Risks for clinicians were minimal, but did include possible psychological distress and possibly breach of confidentiality. However, confidentiality was not breached, as all data collected was submitted securely online and included only the clinician’s demographic information. The subjective, narrative information elicited by the assessment tool was to be used by the clinician only, and was not sent to the researcher, as only scores—i.e. yes/no responses and Likert scale responses---were used in the study.

Confidentiality

No personally identifiable information was collected through the use of the survey.

Retention, Subject Payments, Tracking Procedures

Because the surveys were completed only once, retention was not an issue. Minimal clinician attrition was anticipated, as participating clinicians were made aware of the minimal commitment required before consenting.

There was no compensation for clinicians who participated in the study.

Data Management

All data was stored on a password-protected computer file. Only the researcher had access to the data.
Chapter 3: RESULTS

Participant Characteristics

Table 2 below presents demographic information for the participating clinicians. Twenty-one clinicians participated, 20 of whom were female (95.2%). The most common age range was 41-50 years old (7, 33.3%), followed by 20-30 years old (6, 28.6%) and 31-40 years old (5, 23.8%). More than half of the clinicians were social workers (12, 57.1%); nearly one-quarter were licensed professional counselors (5, 23.8%). Years in practice varied, with a third of clinicians reporting 3-5 years (7, 33.3%) and a third reporting more than 10 years (7, 33.3%). The most common practice setting was outpatient mental health (9, 42.9%). However, almost a quarter reported working in either private practice (5, 23.8%) or a community-based setting such as schools or in-home (5, 23.8%), respectively.

Table 2. Demographics for Participating Clinicians

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Female</td>
<td>20 (95.2%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>6 (28.6%)</td>
</tr>
<tr>
<td>31-40</td>
<td>5 (23.8%)</td>
</tr>
<tr>
<td>41-50</td>
<td>7 (33.3%)</td>
</tr>
<tr>
<td>51-60</td>
<td>2 (9.5%)</td>
</tr>
<tr>
<td>61+</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td><strong>Mental Health Profession</strong></td>
<td></td>
</tr>
<tr>
<td>Social Worker</td>
<td>12 (57.1%)</td>
</tr>
<tr>
<td>Clinical Psychologist</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Marriage and Family Therapist</td>
<td>2 (9.5%)</td>
</tr>
<tr>
<td>Licensed Professional Counselor</td>
<td>5 (23.8%)</td>
</tr>
</tbody>
</table>
Table 3 presents demographic information for the 21 participating children. Just over half were boys (12, 57.1%). The average age was 7.6 with a standard deviation of 2.5. Nearly half of the children had been diagnosed with Post-Traumatic Stress Disorder (10, 47.6%); four (19%) had been diagnosed with ADHD. Four children held other diagnoses (19%), two had no diagnosis (9.5%). The most common type of trauma experienced by the children, which clinicians were aware of prior to the trial, was sexual abuse (7, 33.3%), followed by domestic violence (6, 28.6%) and neglect (3, 14.3%). Two children experienced traumatic loss (9.5%). One child (4.8%) experienced each of the remaining trauma categories: community violence, physical abuse, and medical trauma.

Table 3. Demographics for Participating Children

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Sample (n=21)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12 (57.1%)</td>
</tr>
<tr>
<td>Female</td>
<td>8 (38.1%)</td>
</tr>
<tr>
<td>Diagnosis</td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-----</td>
</tr>
<tr>
<td>No Response</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td><strong>Age mean (SD)</strong></td>
<td>7.67 (2.536)</td>
</tr>
<tr>
<td><strong>Diagnosis</strong></td>
<td></td>
</tr>
<tr>
<td>ADHD</td>
<td>4 (19%)</td>
</tr>
<tr>
<td>PTSD</td>
<td>10 (47.6%)</td>
</tr>
<tr>
<td>Anxiety Disorder</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (19%)</td>
</tr>
<tr>
<td>N/A</td>
<td>2 (9.5%)</td>
</tr>
<tr>
<td><strong>Trauma Type</strong></td>
<td></td>
</tr>
<tr>
<td>Community Violence</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Domestic Violence</td>
<td>6 (28.6%)</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>7 (33.3%)</td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Medical Trauma</td>
<td>1 (4.8%)</td>
</tr>
<tr>
<td>Traumatic Loss</td>
<td>2 (9.5%)</td>
</tr>
<tr>
<td>Neglect</td>
<td>3 (14.3%)</td>
</tr>
</tbody>
</table>

**Preliminary Psychometric Data Analysis**

Internal Consistency

**Table 4. Descriptive Statistics and Cronbach’s Alpha coefficients of the CCTI**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Number of items</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTI Part One</td>
<td>4.29</td>
<td>2.305</td>
<td>10</td>
<td>.632</td>
</tr>
<tr>
<td>CCTI Part Two</td>
<td>42.53</td>
<td>20.635</td>
<td>21</td>
<td>.931</td>
</tr>
</tbody>
</table>

Table 4 displays the mean, standard deviation, number of items, and Cronbach’s Alpha coefficients for part one and part two of the CCTI. The mean of all scores for Part One was 4.29
with a standard deviation of 2.30. The mean of all scores for Part Two was 42.35, with a standard
deviation of 20.63. Part 1, Trauma History, consisted of 10 items and, given this, was found to be
minimally reliable (α=.632). While an acceptable alpha coefficient for a scale is typically around
.700, and ideally closer to .800, given the small number of items, Part One is accepted as
minimally reliable. Part Two, Symptomatology, consisted of 21 items (α=.931) and was found to be
highly reliable.

Table 5. CCTI and UCLA PTSD-RI: Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>CCTI Part One</th>
<th>CCTI Part Two</th>
<th>UCLA Part One</th>
<th>UCLA Part Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCTI Part One</td>
<td>-</td>
<td>.470*</td>
<td>.677**</td>
<td>.619**</td>
</tr>
<tr>
<td>CCTI Part Two</td>
<td></td>
<td>-</td>
<td>.431</td>
<td>.810**</td>
</tr>
<tr>
<td>UCLA Part One</td>
<td></td>
<td></td>
<td>-</td>
<td>.655**</td>
</tr>
<tr>
<td>UCLA Part Two</td>
<td></td>
<td></td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Note: *p< 0.05, **p< 0.01; n=21

Convergent Validity

The convergent validity of parts one and two of the CCTI was examined by exploring
relationships between these variables and their corresponding parts on the standardized UCLA
PTSD-RI and forming a correlation matrix. Table 5 displays the Pearson Correlation Coefficients
between parts one and two of the CCTI and parts one and two of the UCLA PTSD-RI,
respectively. Part one of the CCTI and part one of the UCLA PTSD-RI were positively and
significantly correlated, r=.677, p<.001. Part two of the CCTI and part two of the UCLA PTSD-
RI were strongly positively and significantly correlated, r=.810, p<.001.

In addition, Kappa was calculated to examine the level of agreement for each
psychological trauma type measured by both the CCTI and the PTSD-RI. For physical abuse,
there was an extremely high level of agreement: .897 (p<.001). For sexual abuse there was a high
level of agreement: .798 (p<.001). However, there was low to moderate agreement for each of
the remaining psychological trauma types of medical trauma, domestic violence, natural disaster,
war/prison, community violence, and loss.

Construct Validity

Numerous studies have established that the extent of trauma-related symptomatology
increases linearly with the extent of one’s exposure to traumatic events (Cloitre et al., 2009;
D’Andrea et al., 2012; O’Neill et al., 2010). Pelcovitz et al. (1997) established construct validity
of the SIDES measure by examining the correlation between the frequency and intensity of
symptoms and the amount and severity of trauma exposure. In keeping with this precedent,
construct validity was explored by examining the correlation between Part One (trauma history)
and Part Two (symptomatology) of the CCTI. It was anticipated that there would be a positive and
significant correlation between the two. This was partially supported. There was a significant,
weak but positive correlation of .470 (p<.05).

An additional calculation of construct validity was performed given these results. Table
6 displays the results of Pearson correlations between Part One of the CCTI and the items on Part
Two matching those on the UCLA PTSD-RI, i.e. those measuring PTSD-related symptoms, and
the remaining items on Part Two, i.e. those measuring complex trauma-related symptoms. There
was a positive, significant correlation of .49 (p<.05) between Part One and the PTSD-related
symptoms comprising Part Two. There was a similar positive but insignificant correlation of .42
between Part One and the complex-trauma related symptoms comprising Part Two.

<table>
<thead>
<tr>
<th>Table 6. Pearson correlation coefficients: CCTI Part One, CCTI Part Two PTSD Symptoms, CCTI Part Two Complex Trauma Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>CCTI Part 1</td>
</tr>
</tbody>
</table>
CCTI Part 2 Complex Trauma Symptoms | .415 | - | .810**
CCTI Part 2 PTSD Symptoms | .491* | .810** | -

Note: *p< 0.05, **p< 0.01; n=21

Clinical Utility and Feasibility Survey (CUFS) Analysis

CUFS Parts One and Two

Table 7. CUFS Part One Survey Item Descriptive Statistics
Key: SD= Strongly Disagree=0; D= Disagree=1; N=Neutral=2; A=Agree=3; SA=Strongly Agree=4

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Mean</th>
<th>SD</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The child was engaged throughout the assessment.</td>
<td>D=2</td>
<td>9.5</td>
<td>3.43</td>
<td>.978</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>N=1</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A=4</td>
<td>19.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=14</td>
<td>66.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I found the CCTI easy to use</td>
<td>D=1</td>
<td>4.8</td>
<td>3.48</td>
<td>.928</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>N=3</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A=2</td>
<td>9.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=15</td>
<td>71.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The format of the CCTI helped the child to stay on-task during the</td>
<td>D=1</td>
<td>4.8</td>
<td>3.38</td>
<td>.921</td>
<td>0</td>
</tr>
<tr>
<td>assessment</td>
<td>N=3</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A=4</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=13</td>
<td>61.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The CCTI assessed for all types of traumatic events</td>
<td>D=1</td>
<td>4.8</td>
<td>3.15</td>
<td>.875</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>N=3</td>
<td>14.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A=8</td>
<td>38.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=8</td>
<td>38.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The language used was age-appropriate for my client population</td>
<td>A=9</td>
<td>42.9</td>
<td>3.47</td>
<td>.507</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>SA=12</td>
<td>57.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The CCTI provided me with clinically useful information about trauma history and related symptoms</td>
<td>N=1</td>
<td>4.8</td>
<td>3.57</td>
<td>.598</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>A=7</td>
<td>33.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=13</td>
<td>61.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I had to provide additional explanation beyond the CCTI script to help the child understand some items</td>
<td>SD=3</td>
<td>14.3</td>
<td>2.10</td>
<td>1.261</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>D=5</td>
<td>23.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N=1</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>A=11</td>
<td>52.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA=1</td>
<td>4.8</td>
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</table>
Table 7 presents the frequency, percentage, mean, and standard deviation for each item comprising part one of the CUFS. Results indicate that nearly three-quarters (71.4%) of participating clinicians strongly agreed that the CCTI was easy to use. Close to two-thirds of participating clinicians strongly agreed that the participating child was engaged during the assessment (66.7%), the format helped the child to remain on-task (61.9%), the child responded positively to Cameron’s character (66.7%) and the CCTI provided clinically useful information regarding trauma history and symptoms (61.9%). All clinicians indicated the language used was age appropriate for their client population (42.9% ‘agree,’ 57.1% ‘strongly agree’) and the images
and item language were culturally appropriate for their client population (47.6% ‘agree,’ 52.4 ‘strongly agree’). Eighteen of the 21 clinicians surveyed indicated that the CCTI would be a helpful addition to their current assessment practices, with 23.8% endorsing ‘agree’ and 61.9% endorsing ‘strongly agree’ on this item; the remaining 3 endorsing ‘neutral.’ While these results indicate positive experiences with the CCTI, it was also found that the majority of clinicians needed to provide additional information beyond the item language in order to aid the child’s understanding of the item (52.4% ‘agree,’ and 4.8% ‘strongly agree’).

Table 8. CUFS Part Two Descriptive Statistics
Key: N=None=0; S=Some=1; C=Comprehensive=2

<table>
<thead>
<tr>
<th>Domain</th>
<th>Frequency</th>
<th>Percent</th>
<th>Mean</th>
<th>SD</th>
<th>Missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td>N=2</td>
<td>9.5</td>
<td>1.33</td>
<td>.658</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>S=10</td>
<td>47.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=9</td>
<td>42.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>N=4</td>
<td>19.0</td>
<td>1.14</td>
<td>.727</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>S=10</td>
<td>47.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=7</td>
<td>33.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affect Regulation</td>
<td>N=2</td>
<td>9.5</td>
<td>1.43</td>
<td>.676</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>S=8</td>
<td>38.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=11</td>
<td>52.4</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dissociation</td>
<td>N=8</td>
<td>38.1</td>
<td>.90</td>
<td>.852</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>S=6</td>
<td>28.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=6</td>
<td>28.6</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral Regulation</td>
<td>S=9</td>
<td>42.9</td>
<td>1.57</td>
<td>.507</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>C=12</td>
<td>57.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognition</td>
<td>N=4</td>
<td>19</td>
<td>1.29</td>
<td>.784</td>
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</tr>
<tr>
<td></td>
<td>S=7</td>
<td>33.3</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=10</td>
<td>47.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Concept</td>
<td>N=4</td>
<td>19</td>
<td>1.33</td>
<td>.796</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>S=6</td>
<td>28.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=11</td>
<td>52.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Traumatic Symptoms</td>
<td>N=1</td>
<td>4.8</td>
<td>1.62</td>
<td>.590</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>S=6</td>
<td>28.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C=14</td>
<td>66.7</td>
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</tr>
</tbody>
</table>
Table 8 presents the frequency, percentage, mean, and standard deviation for part 2 of the CUFS, where clinicians were asked to indicate how much information they gleaned on each domain through the use of the CCTI. Two-thirds of clinicians reported getting comprehensive information regarding post-traumatic symptoms (66.7%). More than half reported eliciting comprehensive information regarding behavioral regulation (57.1%), self-concept (52.4%), and affect regulation (52.4%). More than one-third reported no information on dissociation (38.1%). Nineteen percent reported no information on biology, cognition, and self-concept, respectively.

CUFS Part Three—Narrative Feedback

In Part Three, clinicians were asked to provide qualitative information in response to open-ended questions regarding specific items that worked well, specific items that did not work well, suggested changes, and overall feedback about their experience using the CCTI. The following themes emerged from the qualitative data.

Usefulness of pictorial format

Several participants commented on the ways in which the CCTI’s pictures helped to engage the participating children. Quotes include “the pictorial aspect of the CCTI resonated with my client”; “The pictures were of great help with my client in both sections... he was able to keep on task compared to the UCLA questions”; “The character of Cameron worked very well...he really engaged in this and gave more specific information than I’ve gotten from him before.” One participant noted that the participating child, now in ongoing treatment, stills talks about Cameron and they revisit the tool and his responses frequently.

Positive experience with Part One

Feedback regarding Part One, Trauma History, was overwhelmingly positive. Numerous participants noted that it worked very well; two stated they preferred it over Part One of the
UCLA PTSD-RI due to the language of the questions, the images, and the areas assessed. The item inquiring about experiences with neglect was said to be “particularly salient” by one participant; an experience “not adequately addressed” by other trauma assessment measures.

Challenges related to Part Two

Several participants commented on confusing aspects of the visual Likert scale in Part Two, especially for younger children. One young child “interpreted the faces as happy, bored, sad and angry” and another “seemed to be trying to match Cameron’s face in the picture with the response face.” It was suggested that the faces be replaced by varying sizes of a common shape or picture. One participant noted that the more direct nature of the questions in Part Two seemed to stifle the child, as opposed to the questions in Part One which seemed to help her feel more safe in responding as “he/she could answer in the third person”. Additional feedback regarding Part Two included the fact that some questions were wordy and overall the section was lengthy.

Future Use

Although they were not asked whether or not they would use the CCTI again, numerous participants commented that they plan to use the CCTI in the future. Several noted that getting a comprehensive trauma history directly from a child is difficult, and they plan to use Part One to do so. One participant suggested goodness of fit with the Eye Movement Desensitization and Reprocessing (EMDR) protocol, another suggested the same regarding Trauma Focused-Cognitive Behavior Therapy TF-CBT. Both of these participants stated they would use the CCTI during the assessment phase of the respective model.
Chapter 4: Discussion and Conclusion

DISCUSSION

This paper describes the development and initial pilot testing of the Cameron Complex Trauma Interview, an innovative, pictorial-based measure of trauma history and trauma-related symptoms in children. As a whole, the results of the survey data analysis indicate that clinicians experienced the CCTI as useful, comprehensive, developmentally and culturally appropriate, easy to use, and engaging. Thus, the first hypothesis was supported by the data. The results of psychometric analyses indicate that despite the small sample size, the CCTI shows preliminary signs of convergent validity, first due to the significant, positive correlations with the UCLA PTSD-Ri measure, and also due to the high level of agreement between measures in the areas of sexual abuse and physical abuse. Construct validity was supported by the analyses performed. A significant, positive relationship, albeit weak, was found to exist between the two parts of the tool. More importantly, similar relationships were found between Part One and the items measuring trauma-related symptoms in Part Two and Part One and items measuring complex trauma related symptoms in Part Two. This indicates that Part one appears to identify stressors that are approximately equally related to both PTSD and complex trauma symptoms. This is consistent with the literature, as exposure to traumatic events can, but does not automatically, put a child at risk for both PTSD and complex trauma symptoms. The reliability calculations indicate that while Part Two was shown to be highly reliable, Part One was only minimally so, which is likely due in part to the small number of items but also in part to the fact that each item in Part One measures a different construct. Because traumatic experiences do not necessarily co-occur, a high level of internal consistency was not anticipated for Part One. The Kappa calculations offer more constructive information regarding the items in Part One: both sexual abuse and physical abuse, two of the more common trauma types within the sample, were found to have an extremely high level of agreement between measures. This is a very promising result, given that these are
two areas of traumatic experience that tend to be especially difficult for children to talk about. While additional analyses are needed, the results of those performed in this study indicate that there are signs of preliminary psychometric strength, with regard to both reliability and validity, for the CCTI.

The sample of participating clinicians and participating children, while admittedly and unfortunately quite small, was surprisingly diverse. There was an even spread of clinicians with 3 to 5 years of practice experience, and clinicians with more than 10 years. These clinicians were social workers, marriage and family therapists, licensed professional counselors, and clinical psychologists seeing patients in a variety of practice settings. This is significant because it means that the CCTI was trialed by both seasoned and new therapists, from different educational backgrounds, who work with patients in varying levels of care. The sample of children was also heterogeneous with regard to gender, age, diagnosis, and type of traumatic exposure. Interestingly, there was at least one child who experienced each type of traumatic exposure listed. As was anticipated, a high level of agreement was found among all participating clinicians with regard to survey scores. It was not anticipated that the clinicians, or the participating children, would be so different from one another. Taken together, it is essential to point out that the CCTI was found to be useful for different types of child clients as well as different types of clinicians.

While clinicians rated the CCTI quite highly, there were symptom areas where they indicated not receiving much information, namely dissociation, cognition, biology, and self-concept. This could indicate that the items did not adequately address these areas, that the participating children didn’t experience deficits in them, or that the visual Likert scale rating system was flawed, which a discussion of will be expanded upon in the next section.

The narrative feedback provided by clinicians was both informative and insightful. The pictorial format was very well received by clinicians and by children, as was the character of
Cameron. When given the opportunity, clinicians offered that they would like to incorporate the CCTI into their assessment practices. This is notable as research has shown that clinicians often view assessment measures as burdensome with regard to their workload and irrelevant with regard to their client population (Ford et al., 2013; Jensen-Doss & Hawley, 2010). It was also offered, without solicitation, that the CCTI is preferable to the UCLA PTSD-RI when assessment of a young child is needed.

**Study Limitations**

The most obvious and significant limitation was the small size of the sample. Despite several rounds of recruitment, and relatively creative recruitment methodology, only 21 clinicians and, in turn, children, participated in the pilot of the measure. This negatively impacted data analysis and findings in different ways. The Kappa calculations ranging from low to moderate, seemingly randomly, raise several questions unanswerable by the data due to the small sample size. It is possible that the CCTI had more sensitivity for certain types of trauma than the UCLA PTSD-RI, or vice versa. It is also possible that children in the sample did not experience those trauma types. Further research is required with larger samples that have positive cases for each trauma type in order to determine whether the CCTI is accurate for those trauma types. In addition, it was hoped that demographic variables could be cross tabulated with survey results in order to look more closely at whether clinician or child characteristics impacted the clinician’s evaluation of the tool. This would have been helpful in considering changes to be made to the tool or understanding what factors contributed to its successful use. However, this analysis would not have been meaningful given the small size sample.

Psychometric analyses were also clearly affected by the sample size. It was not possible to confidently say that the measure, in sum or otherwise, was reliable or valid. There is an inherent challenge to attempting to establish psychometric soundness by comparing the CCTI
Getting the Picture

with one established measure, as there is not an established measure that assesses all of the same constructs. Ideally, in order to validate each area of trauma history and each symptom area of domain of impairment measured by the CCTI, it would need to be tested alongside numerous measures, such as those recommended by the NCTSN(2003): the Children’s Depression Inventory (CDI), Trauma Symptom Checklist for Children (TSCC), Youth Self-Report Scale (YSR), and Adolescent Dissociative Experiences Scale (A-DES). Other types of reliability, such as test-retest reliability, would need to be evaluated to further strengthen the psychometric properties of the CCTI. Unfortunately, none of this was feasible for the current research project, given time constraints, lack of funding, and the overall scope of the dissertation.

Part Two of the CCTI created some challenges for participating children and the clinicians assessing them. The visual Likert scale proved to be somewhat problematic, especially for younger children. They were confused by what the faces comprising the scale were meant to depict and struggled to use them to describe their own level of distress or impairment. It is possible, then, that this negatively impacted the results of Part Two of the Clinical Utility and Feasibility Survey, where clinicians responded that they did not receive any information on the above named symptom areas. If children did not know how to indicate that they did, in fact, experience some degree of the symptom, it follows that clinicians would respond the way they did when asked how much information they received about the symptom.

Directions for Future Research

The positive feedback elicited by this small pilot indicates that, at the very least, further study of the efficacy and feasibility of the CCTI is warranted. As mentioned above, working to establish strong psychometric characteristics will be an important part of the work going forward. Reaching a wide audience, with regard to the clinicians and children, is ideal. To be frank, more people need to have access to the tool and the opportunity to evaluate it.
The concerns related to Part Two warrant additional attention and, likely, revision of the CCTI. As one clinician suggested, addressing the complaints about the visual Likert scale by changing the images of Cameron’s face depicting different levels of distress to varying sizes of a common object or shape may eliminate some confusion for younger children. Exploring ways of shortening item language would also be valuable, as would close examination of the items measuring dissociation. One clinician noted that the child responded much more positively to the way questions were asked in Part One, as he/she was able to respond to them in the third person, and may have been stifled by the more direct nature of the questions in Part Two. This feedback indicates that Part One allowed that child to use Cameron as a surrogate—which was the hope—where Part Two did not. As such, it would be worthwhile to revisit the question wording used in Part Two and consider placing more emphasis on Cameron’s experiences so as to promote a sense of safety for the child.

The potential for the CCTI to be used prior to beginning evidence-based treatment protocols for traumatized children is an important idea for future study, and emerged partially from the qualitative data. Clinicians trained in EMDR and TF-CBT suggested that the CCTI might work well in the assessment phases of these respective models. Similarly, best practice standards recommend that the assessment of trauma-related symptoms in children exposed to multiple traumatic stressors be an ongoing process, as it has been established that different symptoms may appear, change, or resolve at different points during treatment (Lanktree & Briere, 2008). In their assessment-driven model, Integrative Treatment of Complex Trauma for Children (ITCT-C), Lanktree and Briere (2008) stress the importance of assessing children at intake and at regular intervals—every three to four months—in order to establish what specific treatment modalities may be most appropriate at a given time and to track symptoms in a systematic way. This type of ongoing assessment and tracking is integral for treatment planning. An area of future study is to explore whether the CCTI, particularly Part Two, may be of value to
assessment-driven models such as the ITCT-C. Additional feedback from the CUFS was that having a way to score Part Two would have been helpful, despite the fact that assigning numeric value to responses is not meaningful diagnostically. One option that would encompass both scoring and cohesion with assessment-driven models is the use of a symptom scoring and tracking sheet, similar to the one recommended in the ITCT-C protocol, that allows clinicians to maintain a log of symptom scores. Note an example of this form, the Symptomatology Assessment-Treatment Flowchart, in the Appendix.

Recruitment through the business-oriented social networking site, LinkedIn, elicited a rather unexpected but exciting direction for future research with the CCTI. The website reaches an international audience, so the information posted about the research did, as well. Clinicians in Australia, England, Italy, South Africa, and the Netherlands contacted this researcher asking for information about the CCTI and expressing interest in participating in the pilot. While it was explained that their participation in the current study would not have been appropriate, their initial contact led to additional conversations about the potential for other versions of the CCTI, specific to their location and culture, at some point in the future. Trauma impacts children all over the world; comprehensive, developmentally appropriate methods of evaluating these children, in ways that are respectful of and sensitive to cultural idiosyncrasies, are invaluable regardless of geographic location. Adapting the CCTI cross-culturally, and exploring psychometric characteristics of the new version(s) is an additional focus for future study.

Lastly, the pictorial format utilized by the CCTI received extremely positive feedback and was shown to be especially engaging and developmentally appropriate for children ages 5 to 11. This format had not been used with success in the past in assessing for trauma history, but has been used successfully to measure other constructs. It is the hope of this researcher that others will consider adopting the pictorial format, or adding a pictorial element to existing measures, as a way of allowing children to safely explore their internal states.
Application to Social Work Practice

The CCTI was created with social work practitioners in mind. Aware of the frustrations inherent to doing challenging clinical work where one may feel ill equipped or without the necessary resources to make sense of complicated presentations and histories, the CCTI aims to provide a comprehensive, one-stop-shop of sorts for clinicians who aim to address the needs of a very vulnerable population. While many valid, reliable, and sound tools exist in the area of child trauma, they are not always accessible, and, when considering the idiosyncrasies of children impacted by ongoing trauma, they are not ever comprehensive. The goal was not to develop a research tool, but a practice one; to allow clinicians to gain as much information as possible in one session, leaving that session with data that informs treatment planning and future intervention.

The format of the tool--using culturally sensitive images with developmentally appropriate language--allows practitioners to explore complex, often difficult material directly with children in treatment. While caregiver feedback is of great value, the tendency to avoid asking children directly about their experiences, both external and internal, is problematic. The CCTI provides a child-friendly, practitioner-friendly way of gaining vital information from children who will greatly benefit from telling their stories in ways that allow them to feel safe and secure. It also provides the potential for gathering data in an ongoing fashion. Ongoing assessment evaluates the child’s progress in treatment and identifies treatment priorities, while also aiding the clinician in determining the effectiveness of the chosen treatment model (Lanktree & Briere, 2008). Further development of the CCTI will only serve to improve the likelihood that this can happen in a scientifically sound manner.
REFERENCES


Getting the picture: A cartoon-based assessment tool for complex trauma in children.

What is the purpose of the study?
The purpose of the study is to test the effectiveness of a cartoon-based trauma assessment tool, as compared to a standardized trauma measure.

Why was I asked to participate in the study?
You are being asked to join this study because you are a Master's or Doctoral level clinician providing services to children with history of trauma.

How long will I be in the study? How many other people will be in the study?
The study will take place over a period of nine months. However, your participation will take approximately two to three hours. You will be one of approximately 30-50 participants.

Where will the study take place?
You will be asked to complete the intervention at your place of employment.

What will I be asked to do?
• You will be given training information regarding the assessment tools, as well as overall procedures for the study, and asked to review this information and familiarize yourself with it.
• You will be asked to complete the assessment tools with a client, ages 5 to 11, with a history of traumatic exposures, in accordance with your employer’s policies and practice standards.
• You will be asked to submit basic demographic information on yourself (gender, age group, profession, years in practice, practice setting) and
the client chosen (gender, age, existing diagnosis, type of trauma that indicates participation), submit scores for each assessment, and complete a three-part evaluation survey online regarding the usefulness and comprehensiveness of the CCTI.

What are the risks?
Risks inherent to participation in the study are minimal. However, it is possible, due to the time commitment and additional documentation required, that you could possibly incur some psychological distress. Breach of confidentiality is a risk inherent to any survey-based research project. However, you will not be asked to provide any personal, identifiable information about yourself or your client. Also, because the data being measured is delivered securely via the internet, this risk is minimal.

How will I benefit from the study?
You and your agency are granted lifetime access to use of the CCTI. Indirectly, your participation could help us better understand how to elicit comprehensive information regarding traumatic experiences and symptoms from urban youth with reading and language deficiencies. In the future, this may help other people to assess and treat this vulnerable population.

What other choices do I have?
Your alternative to being in the study is to not be in the study.

What happens if I do not choose to join the research study?
You may choose to join the study or you may choose not to join the study. Your participation is voluntary.

When is the study over? Can I leave the study before it ends?
The study is expected to end after all participating clinicians have completed the assessments and the evaluation, and all the information has been collected. The study may be stopped without your consent for the following reasons: o The PI feels it is best for your safety and/or health-you will be informed of the reasons why. o You have not followed
the study instructions o The PI, the sponsor or the Office of Regulatory Affairs at the University of Pennsylvania can stop the study anytime. You have the right to drop out of the research study at anytime during your participation. There is no penalty or loss of benefits to which you are otherwise entitled if you decide to do so. Withdrawal will not interfere with your future care. If you no longer wish to be in the research study, please contact Jennifer Boyle, atboyleje@sp2.upenn.edu or (440)346-2407 and take the following steps: Outline your reasoning for withdrawing for the study, note how much of the data has been obtained, and explain how this data will be given to the researcher.

How will confidentiality be maintained and my privacy be protected?

No personal or identifiable information about you or your child client will be shared with the research team; surveys will be completed anonymously and you will not be asked for sensitive information. As such, your privacy, and the privacy of your client, will be maintained. The research team will make every effort to keep all the information you tell us during the study strictly confidential, as required by law. The Institutional Review Board (IRB) at the University of Pennsylvania is responsible for protecting the rights and welfare of research volunteers like you. The IRB has access to study information. All data will be stored on a password-protected computer file. Only the researcher will have access to the data. All data will be destroyed when the study is over.

Will I have to pay for anything?
There is no cost associated with participating in the study.

Will I be paid for being in this study?
You will not be compensated for participating in the study.

Who can I call with questions, complaints or if I’m concerned about my rights as a research subject?
If you have questions, concerns or complaints regarding your participation in this research study or if you have any questions about your rights as a research subject, you should speak with the Principal
Investigator listed on page one of this form. If a member of the research team cannot be reached or you want to talk to someone other than those working on the study, you may contact the Office of Regulatory Affairs with any question, concerns or complaints at the University of Pennsylvania by calling (215) 898-2614.

1. If you would like to participate in this study, click the 'Yes' button below to grant your consent. If you do not want to participate, click the 'No' button and exit this browser window. *This question is required.

   - Yes
   - No

2. I am a licensed mental health professional, with an educational level of Master's degree or higher. If you cannot answer 'Yes' to this question, please discontinue participation and exit out of this browser window. *This question is required.

   - Yes
   - No

3. I agree to administer the CCTI and the UCLA PTSD-RI to a traumatized client between the ages of 5 and 11 and report on the client's and my own experience of the CCTI by completing this anonymous survey. If you cannot answer 'Yes' to this question, please discontinue participation and exit out of this browser window. *This question is required.

   - Yes

APPENDIX B: Clinical Utility and Feasibility Survey

Clinical Utility and Feasibility Survey
Part One

Please indicate your level of agreement with the following statements, based on your trial of the CCTI. The term “child” refers to the child you used the CCTI with.

1. The child was engaged throughout the assessment. 0 1 2 3 4
2. I found the CCTI easy to use. 0 1 2 3 4
3. The child required redirection during the assessment. 0 1 2 3 4
4. The CCTI assessed for all types of traumatic events. 0 1 2 3 4
5. The language used was age-appropriate for my client population. 0 1 2 3 4
6. The CCTI provided me with clinically useful information about trauma history and related symptoms. 0 1 2 3 4
7. I had to clarify and/or provide examples more than once during the assessment. 0 1 2 3 4
8. The CCTI did not address traumatic events commonly experienced by my client population. 0 1 2 3 4
9. The CCTI took an appropriate amount of time to complete. 0 1 2 3 4
10. The images and questions were culturally appropriate for my client population. 0 1 2 3 4

11. The CCTI seemed to be an added paperwork burden. 0 1 2 3 4

12. The instructions were easy to understand and follow. 0 1 2 3 4

13. The CCTI asked about additional traumatic events not typically included my usual assessment practices. 0 1 2 3 4

14. The child responded positively to Cameron’s character. 0 1 2 3 4

15. The CCTI would be a helpful addition to my current assessment practices. 0 1 2 3 4

Part Two

Please indicate the amount of information you received from the child on the following domains.

<table>
<thead>
<tr>
<th>Domain of Impairment</th>
<th>None</th>
<th>Some</th>
<th>Comprehensive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td></td>
<td></td>
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<tr>
<td>Affect regulation</td>
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<tr>
<td>Dissociation</td>
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<tr>
<td>Behavioral regulation</td>
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<tr>
<td>Cognition</td>
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<tr>
<td>Self-concept</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part Three

Please provide any subjective responses you may have.

Specific items that worked well (indicate Part 1, 2, or 3, and item number):

Specific items that worked poorly (indicate Part 1, 2, or 3, and item number):

How can these items be revised? Would you rather they be eliminated?

Are there any overall changes you would like to see to the CCTI?

Any additional feedback:

Appendix C: CCTI Training Manual

Cameron Complex Trauma Interview

Training Manual

INTRODUCTION:
Please keep in mind that this is not a self-report measure, but a semi-structured interview. You have the freedom to rephrase items, use examples and probes however you believe will be helpful in eliciting information. The probes offered here are mere suggestions. Use your own personal style and clinical expertise as much as possible, with the item language as a guide.

You have the option of printing the CCTI to go through with the child, or keep it up on a computer screen and go through it that way. If you choose the former, it is ideal to print in color. If you choose the latter, you will want to have scratch paper where you can record the child's responses.

A note on culture:

Every child belongs to multiple ethnocultural groups, factors of which impact the development and experience of trauma. People of different cultural backgrounds can define trauma-related concepts in many different ways and using different expressions. For example, different cultures have different concepts of 'family' in terms of who is or is not a member and the roles and responsibilities of each member. Be sure to clarify when asking questions regarding the child's family, as this may or may not mean the people who are blood related or living in his/her home. While it is important to be cognizant of cultural differences, it is equally important not to generalize across cultural/ethnic groups while recognizing differences within groups. An attitude of cultural curiosity is valuable when engaging a child in use of the CCTI.

INTERVIEWER GUIDE:

To Begin:

For new clients, ask a few casual, rapport-building questions. Initial questions should be unrelated to the topic of trauma, such as the child's age, where he/she goes to school, does he/she have any brothers or sisters, what are his/her favorite games, TV shows, movies, etc. This should help the child become accustomed to talking with the interviewer in a nonthreatening manner. If this is a child you've previously met with, begin your session as you usually would.
Introduce the character of Cameron, for younger children referring to him as your “friend.” Allow the child to react to the character, and then explain that you will be talking about some of the things that have happened to Cameron and some of the problems he has, and will be comparing the child’s experiences to these.

Part 1---- Trauma History:

Because repeated traumatic experiences are so common, be sure to ask about all experiences with any question in Part 1. Do not assume there was a singular experience, especially questions regarding physical abuse, sexual abuse, intimate partner violence, and neglect. “How many times did that happened to you?” or “did that happen more than once?” Seek typical ‘who, what, where, when, how’ details for each experience. At this point you do not need to inquire about emotional reactions to these events, but inquiring about repercussions (i.e. police came to the house, mother went to the hospital, child had to stay with a relative, etc) is beneficial. In addition, both witnessing and experiencing the traumatic events in part one is significant. Where appropriate, clarify whether the child experienced the event directly, or witnessed it happening to someone else.

Suggested Introduction:
“I’M GOING TO ASK YOU ABOUT SOME THINGS THAT SOMETIMES HAPPEN TO KIDS. WE’LL TALK ABOUT A BUNCH OF OTHER THINGS THAT HAVE HAPPENED TO YOU, BUT RIGHT NOW I’D LIKE TO KNOW ABOUT THINGS THAT WERE THE WORST OR HARDEST THINGS THAT EVER HAPPENED TO YOU. IF I ASK ABOUT SOMETHING YOU DON’T WANT TO TALK ABOUT, JUST SAY ‘PASS’ OK?”

Item probe suggestions—remember to obtain information on EACH traumatic experience within anyone question:
1. Accident: When this happened, were you hurt? Was anyone hurt? How old were you? Was someone you know in the accident? Were there strangers?
2. Physical abuse: Who tried to hurt you? How did they hurt you: hitting, kicking, biting, choking, smothering, burning, use of object/weapon. Ask about weapons/objects if it’s indicated. Where were you hurt? Did it leave marks? What kind? How old were you when this first happened? The last time it happened?
3. Hospital/operation: What happened? How long did you stay at the hospital? Did someone stay with you for most of the time? Did someone visit you?
4. Separation: What happened? Did you see the police/soldiers? Was anyone hurt?
5. Community violence (fighting): What did you see/hear? Did they have guns in their hands? Did they have knives? Did you hear shots? Was anyone hurt?
6. Neglect: What happened? Who was supposed to be there with you? Did that person come back? When?
7. Death: Who got sick/died? What happened to them? How old were you? What grade were you in?
8. Domestic violence: What happened? How did they fight with or yell at each other? Did they use weapons? How often did they fight or yell at each other? Did anyone have to go in an ambulance or to the hospital because they got hurt?
9. Sexual abuse: Who did this to you? How old were you when it first happened? When it most recently happened? What happened? Did this happen to you any other times with someone else?
10. Community violence (robbery): When this happened, was anyone hurt? Who was involved? Did the police come?

Part 2—Symptoms:

For any endorsed symptom, seek information regarding the frequency and intensity of the symptom in the last month. For younger children, use the visual scale appearing alongside each question, asking “how much does this bother you?” or how big of a problem is this for you?”. For older children, use the visual scale while also asking directly about frequency and intensity (“does this happen everyday?” “how bad does it get?” “Can you tell me about it at its worst?”). If the child responds that this has not happened in the last month, but you believe with more clarification you may find it’s been a problem in the past, ask about a time it did occur (i.e. bed-wetting) and how upsetting the problem was then.

Match language to child’s gender: Although the questions are written as ‘he,’ Cameron is meant to be a gender-neutral character. As such, feel free to change pronouns to ‘she’ for female children.

Suggested Introduction:

“NOW WE ARE GOING TO TALK ABOUT SOME PROBLEMS AND FEELINGS CAMERON SOMETIMES HAS BECAUSE OF THE BAD THINGS THAT HAVE HAPPENED TO HIM. I’M GOING TO ASK YOU IF YOU EVER HAVE ANY OF THESE SAME PROBLEMS OR FEELINGS, AND HOW BIG OR BAD THEY ARE IF YOU DO.”

Item Probe Suggestions:
1. Did you go to the doctor? What did the doctor say?
2. Does this happen at home or at school or both? Does it get you in trouble?
3. Do you think you are dirty/disgusting? Do you think you’re ugly? Do you think no one could ever like you? Do you think you’re stupid and dumb?
4. What happens when the feelings get so big? How do you feel? Do you hit people or animals? Do you tear things up? Do you feel out of control?
5. Do you try to calm down but you can’t? What helps you feel better?
6. Do you only start activities if someone else reminds you or helps you get started? Do you only start activities if someone else makes you do it or does most of it for you? Do you give up and not start because you feel like you’ll just fail if you try?
7. Do you take or hide things so you have them in case you have to leave?
8. What does that feel like? Do you ever feel weird inside and wish you were someone else?
9. How does it feel when this happens? Can you make the feeling go away?
10. Is it certain parts of your body? Does this happen because you get so upset that you accidentally hurt your body? Does it leave marks?
11. What does that feel like? Do you check over your shoulders? Do you worry about doors being locked?
12. How does this feel? What pops into your head?
13. Do you get sad? Do you get angry?
14. Do you know what you’re feeling but not know the words to describe it?
15. Is this with everyone in your life? Is this for every kind of touching?
16. Who do you not feel safe around? Is it because they didn’t tell the truth? Is it because they didn’t keep their word and didn’t do what they said they’d do? Is it because they didn’t help you when you really needed their help?
17. Do you feel angry? Do you feel sad? Do you give up trying? Or act up in class?
18. Does this happen every night? Are the dreams different? Are they always the same?
19. Where do you go to the bathroom? Do you go pee or poop? Do you touch it or play with it?
20. Who do you feel like this about? Do you worry about them being safe? Do you feel like you have to protect them? Do you feel like you’re the mom/dad?
21. Do you think of ways to handle the bad things if they ever did happen again? Can you put the bad things out of your mind by doing something fun?

SCORING:

For Research Purposes—

Part One:
Any endorsed question gets a score of ‘1.’ For the sake of this research, you do not need to count each individual experience, only each ‘yes’ response for questions 1 through 10. Input this information into the Surveygizmo site.

Part Two:
Score any endorsed symptom with the corresponding Likert value, as indicated by the child: 1, 2, 3, 4. Any ‘no’ response receives a score of ‘0.’ Input this information into the Surveygizmo site.

For Your Own Future Clinical Use—
Consider use of the following—Symptomatology Assessment-Treatment Flowchart-- to systematically track symptom presence and severity over time.

Symptomatology Assessment-Treatment Flowchart

Adapted from Lanktree and Briere (2008)

It is recommended that symptoms related to complex trauma be assessed in an ongoing fashion, initially at intake and then in three to four month intervals. Use the following scoring form to track symptoms and symptom intensity over time, in order to evaluate client progress and inform treatment planning. The item numbers pertaining to the problem area are indicated: for example, issues related Attachment are measured by questions 7, 16, and 20. Any symptom not present is scored as ‘0.’
| Problem Area         | Items | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|----------------------|-------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1. Attachment        | 7.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 16.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 20.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
| 2. Biology           | 1.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 15.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 19.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
| 3. Affect Regulation | 4.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 14.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 5.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
| 4. Dissociation      | 8.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 9.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
| 5. Behavioral Control| 10.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 2.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
|                      | 13.   | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
| 6. Cognition         | 6.    | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  | 0  | 1  | 2  | 3  | 4  |
APPENDIX D: CCTI Sample Items

**NOTE: For information on how to obtain a full, updated copy of the CCTI, or participate in ongoing research, please e-mail Jennifer A. King at jak292@case.edu**

CCTI SAMPLE ITEMS

**PART ONE: TRAUMA HISTORY**
1. Have you ever been in a bad accident, like a car accident or a fire?

2. Has a grown-up hurt you really bad? Choked you, pushed you, shook you, or beat you up?
3. Have you ever had to sleep over at the hospital? Or have an operation?

4. Has anyone at your house ever had to go to jail? Or have the police or soldiers come to your house and said you or your family were in trouble?
**PART TWO: SYMPTOMS**

For any of the following questions answered ‘yes,’ please circle the face that the child chose to indicate how much this problem bothers him/her:

1. When Cameron thinks about some of the bad things that have happened to him, he sometimes starts to feel sick. He might have tummy aches or headaches. Does this happen to you?
2. A lot of kids don’t like rules. But sometimes Cameron doesn’t follow rules because he thinks they’re unfair or don’t make sense, and he gets in trouble at home or school. Does this happen to you?

1                        2                        3                        4

3. Sometimes Cameron thinks he is an ugly, bad dog and he hates himself. Do you ever feel that way?

1                        2                        3                        4