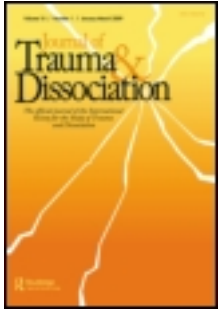


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Measuring Trauma: Considerations for Assessing Complex and Non- PTSD Criterion A Childhood Trauma

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Measuring Trauma: Considerations for Assessing Complex and Non- PTSD Criterion A Childhood Trauma

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Abstract

The current definition of a traumatic event in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; APA, 2013) may be too narrow to describe the myriad of difficult childhood experiences. Furthermore, youth may develop a distinct pattern of symptoms in relation to complex or multiple childhood trauma, the proposed “developmental trauma disorder” (DTD; van der Kolk, 2005). Researchers in the present study developed and utilized a new measure, the Potentially Traumatic Experiences Questionnaire (PTEQ), to assess patterns in childhood trauma exposure. Two item formats (open-ended vs. closed-ended) were used in order to explore potential differences in reporting. Further, the present study assessed for symptoms associated with DTD following exposure to complex childhood trauma in a sample of adolescents. Participants were 186 eighteen- and nineteen-year-olds who were asked to report retrospectively on their difficult childhood experiences. The results showed that participants reported multiple events that would not be considered ‘traumatic’ by the DSM-V PTSD Criterion A, and those who completed the PTEQ with closed-ended items reported more differentiated trauma types than participants who completed the open-ended questionnaire. Also, participants who reported multiple or chronic events were more likely to endorse symptoms associated with DTD. This study has implications for the diagnosis and treatment of complex trauma experiences in youth.

keywords: developmental trauma disorder, complex trauma, trauma assessment in youth

Introduction

The current diagnosis of PTSD in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2013) addressed many of the concerns raised by the DSM-IV TR; still, problems remain, particularly in regard to the diagnosis for children and adolescents (APA, 2000; APA, 2013). Specifically, many stressful childhood experiences may not qualify as ‘traumatic’ by the DSM-5, and thus, erroneous diagnoses or under-diagnosis may result. Evidence-based trauma exposure measures are keyed to the DSM and may under-identify events that youth may consider traumatic; thus, there is a need for the development of a new measure to capture these experiences. In response to criticisms of the PTSD diagnosis for children within the DSM, a new diagnosis, with a unique pattern of symptoms, was proposed—“developmental trauma disorder” (DTD; van der Kolk, 2005). Given the limited work on DTD, the present study examined the utility of a new measure to assess for potentially traumatic events and its relation to symptoms of DTD.

DSM-5 PTSD Criteria

The inclusion of certain developmental considerations and elimination of the peritraumatic response Criterion for the PTSD diagnosis in the DSM-5 (American Psychiatric Association, 2013) has addressed many of the criticisms from DSM-IVTR (American Psychiatric Association, 2000; Gold, Marx, Soler-Baillo, & Sloan, 2005; Kerig & Bennett, 2012; Pynoos et al., 2009; Scheeringa, Myers, Putnam & Zeanah, 2012). However, some concerns with the current PTSD Criteria remain. First, the diagnosis for PTSD is unique because it requires a causal link between an external factor (Criterion A) and psychopathology (Van Hooff,

McFarlane, Baur, Abraham, & Barnes, 2009). Historically, the external factor has been considered a discrete event and what qualifies as traumatic has been problematic. The most current definition of a traumatic event in Criterion A of PTSD is “exposure to actual or threatened death, serious injury, or sexual violence,” and includes directly experiencing the event, witnessing the event, learning the event happened to a close friend/family member, or experiencing repeated/extreme exposure to aversive details of the event (APA, 2013, p. 271). The current definition of a traumatic event may not be broad enough, particularly for children and adolescents. Research demonstrates that many stressful childhood experiences are not included in PTSD Criterion A, such as living with a caregiver with mental illness, frequent separation from a caregiver, repeated verbal abuse, etc. (D’Andrea, Stolbach, Ford, Spinazzola, & van der Kolk, 2012; Gold et al., 2005; Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, & Marks, 1998; Pynoos et al., 2009; Taylor & Weems, 2009).

Accordingly, the DSM-5 added some developmental considerations for the symptom criteria of the PTSD diagnosis, including a subtype for children age 6 and younger, which was found to identify significantly more cases of PTSD in young children (Scheeringa et al., 2012). However, the traumatic event criterion is more restricted for this subtype, as it does not include experiencing repeated/extreme exposure to aversive details of the traumatic event (APA, 2013; Scheeringa et al., 2012), despite research suggesting that PTSD Criterion A would benefit from a broader definition for children (van der Kolk, 2005). Indeed, the current criteria ignores experiences often cited as disruptions in attachment relationships, which can lead to some of the most complicated trauma-related symptoms, such as dissociation and affect dysregulation (Chaffin et al., 2006; Farina & Liotti, 2013). In addition, the current criteria may exclude

individuals who experience minority-status related stressors (e.g., historical trauma; Braveheart, 2003; Gone, 2009), or commonly experienced stressors that occur in childhood such as bullying (Dupper & Myer-Adams, 2002). Although bullying may include physical assault, it often may be only relational in nature and thus would not typically be considered a PTSD Criterion A event (D'Andrea et al., 2012). Bullying that involves emotional and/or relational abuse is strongly related to PTSD symptoms (Van Hooff et al., 2009). However, emotionally or relationally abusive bullying cannot be clinically linked to PTSD *specifically* since the Criterion A definition precludes this relationship. These issues underscore the need for a revised measure of trauma exposure in youth that includes a broader assessment of stressful experiences than are found in current measures.

Measuring Childhood Trauma Exposure

Amaya-Jackson, Socolar, Hunter, Runyan, and Colindres (2000) reviewed various methods for assessing children's exposure to PTSD Criterion A trauma events and noted that differences in measure construction affected the prevalence rates of sexual abuse in different adult populations. For example, face-to-face interviews yielded higher prevalence rates than pencil-and-paper questionnaires. Further, the use of several, behaviorally-specific questions to ask about acts of sexual abuse also resulted in higher rates of self-report. Amaya-Jackson and colleagues found that trauma exposure questionnaires vary significantly in regard to event specificity, whether or not they assessed for perpetrator, time frame, and frequency or severity of the event. The authors recommended that measures utilize clearly defined constructs of interest. Further, individual items should ask about specific behaviors included in the definition (e.g., "Have you been

attacked with a weapon, such as a knife, bottle, or chair, by someone other than your mother or father?”). Finally, a catch-all question should be provided to include other events not traditionally considered or commonly experienced.

In contrast to measures used to assess for exposure to PTSD Criterion A events, measures that assessed for stressors not included in the DSM definition typically used an open-ended or less behaviorally-specific format (Saylor, Macias, Wohlfeiler, Morgan, & Awkerman, 2009; Taylor & Weems, 2009). Saylor and colleagues (2009) assessed for potentially traumatic life events (PTLE) by asking parents: “If your child has had a major trauma or stress in the last year, please describe it...”; 43% of participants reported PTLEs. Taylor and Weems (2009) also used an open-ended format and asked a community sample of youth to report events they considered traumatic (i.e., “...Can you tell us if anything happened to you that was very scary or frightening?”); 61% reported stressors not included in PTSD Criterion A. Given differences in item format for trauma exposure, further research is needed to examine the role of open-ended vs. closed-ended questionnaire methods in reporting.

Despite the high prevalence of various traumatic experiences in childhood, and the need for measuring exposure to stressors that may be potentially traumatic, current established self-report questionnaires assessing childhood trauma exposure typically do not address chronic trauma or the capacity to report on symptoms for multiple trauma types (Felitti et al., 1998; Hawkins & Radcliffe, 2006). Although some structured interviews measure chronicity of traumatic events, the availability of a self-report measure is needed as well. Self-report measures are a key component of multi-method assessment, as they provide a less time-consuming and inexpensive way to assess for trauma, and some individuals may feel more comfortable

responding truthfully to a questionnaire than an interviewer (Nader, 2008). Both structured interviews and self-report measures that assess for traumatic experiences as defined by the DSM typically require the informant to choose the most distressing event and relate associated symptoms to only that event (Hawkins & Radcliffe, 2006). Aside from the potential challenges in determining the worst out of more than one distressing event, valuable clinical information may not be reported if the respondent is only allowed to report symptoms related to one event. Given that the effects of experiencing multiple stressors are likely to be additive, it seems misguided not to include all distressing events experienced (Felitti et al., 1998; Hawkins & Radcliffe, 2006). Thus, a new self-report trauma measure may expand upon current measures by permitting respondents to report on multiple distressing experiences and prolonged trauma experiences (Hawkins & Radcliffe, 2006).

Developmental Trauma Disorder

Addressing the limitations of the PTSD diagnosis as effective for identifying and treating those with complex trauma histories, Herman (1992) originally described the unique symptom presentation of complex trauma survivors using the term “complex PTSD” (pp. 377). Herman argued that complex PTSD is experienced by survivors of prolonged, repeated trauma experiences and the symptom presentation differs from PTSD. First, survivors of complex trauma experience a multiplicity of symptoms, including an amplification of physiological symptoms of PTSD, dissociation, and affective symptoms (i.e., guilt and hopelessness; Herman, 1992). Second, survivors often experience changes in relationship (i.e., oscillations between intense attachment and withdrawal), changes in identity (i.e., sense of self as contaminated,

guilty, and evil), and repetition of harm, which may take the form of self-mutilation or re-victimization (Herman, 1992).

Given the prevalence of chronic and multiple stressors in children's lives, as well as concerns that the current PTSD diagnostic criteria may not accurately describe a majority of trauma-exposed youth, van der Kolk (2005) expanded upon Herman's (1992) work by suggesting a new diagnosis for young victims of complex trauma. The proposed DTD captures the consistent and predictive emotional, behavioral, and neurobiological sequelae of children exposed to multiple and/or chronic trauma experiences (which may not meet PTSD Criterion A). DTD is characterized by exposure to one or more forms of multiple or chronic "developmentally adverse interpersonal trauma," (Criterion A), a subjective experience of fear, betrayal, shame, etc. (Criterion A1), a triggered pattern of repeated dysregulation in response to trauma cues (Criterion B), persistently altered attributions and expectancies (Criterion C), and functional impairment (Criterion D; van der Kolk, 2005; pp. 404). Dysregulation can occur in any of the following areas: affective, somatic, behavioral, cognitive, relational, and self-attribution. Examples of dysregulation in these areas include somatic complaints, re-enactment of the traumatic experience, confusion, clinging behavior, and self-hate. Examples of persistently altered attributions and expectancies include "negative self-attribution, distrust of protective caretaker, loss of expectancy of protection by others, loss of trust in social agencies to protect, lack of recourse to social justice, and inevitability of future victimization." Lastly, functional impairment may be present in the following areas: educational, familial, peer, legal, and/or vocational (van der Kolk, 2005; pp. 404). In support of this diagnosis, considerable research suggests that complexly traumatized children present with a strong reliance on dissociation as a

coping mechanism (Chu, 2010) and neurobiological features have been identified that distinguish a dissociative subtype of PTSD, which is now included in DSM-5 (APA, 2013). This may indicate that the psychological sequelae of complex trauma are different from that of isolated traumatic events and/or children's expression of posttraumatic stress is different from adults.

The role of multiple stressors not included in PTSD Criterion A, such as experiencing multiple moves, chronic sibling discord, witnessing frequent, non-physical parental discord, and bullying, is just beginning to be recognized in the literature and is thought to result, at times, in complex trauma reactions. The experience of multiple stressors may increase adverse effects (Cloitre et al., 2009). For example, Felitti and colleagues (1998) conducted an assessment of adverse childhood experiences (ACE), including some stressors that would be considered traumatic according to the current DSM definition (e.g., sexual abuse) and others that would not (e.g., changing schools). The authors concluded that exposure to any of the ACEs increased one's risk for developing mental illness, disease, or adult risk behaviors (e.g., smoking, drug abuse). Further, risk increased as number of experiences increased (Felitti, et al., 1998). Indeed, this landmark study provided evidence that stressors not included in PTSD Criterion A are linked to many deleterious outcomes.

Other studies investigating the effects of cumulative childhood trauma have demonstrated that not only is cumulative trauma common, but it is also associated with a more complex symptom presentation (Briere, Kaltman, & Green, 2008; Richardson, Henry, Black-Pond, & Sloane, 2008). That is, results have established a linear relationship between number of childhood traumatic events and symptom complexity (Briere et al.) as well as a positive association between types of maltreatment and increased delays in several neurodevelopmental domains

(Richardson et al.). One study utilized a broad definition of trauma, including trauma types not included in the DSM definition (e.g., emotional abuse) and established that childhood trauma is associated to symptom complexity in a rule-governed way, such that childhood cumulative trauma leads to more severe PTSD symptoms as well as qualitatively different symptoms, including self-regulatory, affective, and interpersonal difficulties (Cloitre et al., 2009). Thus, it is imperative that chronic and multiple trauma experiences be considered in the formulation of a developmentally appropriate trauma diagnosis.

In 2002, the Complex Trauma Workgroup conducted a survey to assess the common experience of complex trauma as reported by clinicians at sites belonging to the National Child Traumatic Stress Network (NCTSN; Spinazzola et al., 2005). Findings indicated that more than half of the child clients experienced psychological maltreatment (i.e., verbal abuse, emotional abuse, or emotional neglect) and traumatic loss. It was also reported that more than 40% of the children were dependent on an impaired caregiver (e.g., mental illness or substance abuse), witnessed domestic violence, and/or experienced sexual maltreatment or assault. Physical, medical, or educational neglect were reported in 30% of children. Results found that a large percentage of children experienced a variety of symptoms not associated with PTSD. For example, 50% or more exhibited disturbances in affect regulation, negative self-image, impulse control, and/or risk-taking. Most children who do experience complex trauma, such as prolonged abuse, do not receive a diagnosis of PTSD; they are most commonly diagnosed with conduct disorder, oppositional defiant disorder, or separation anxiety (Cook et al., 2005; Spinazzola et al., 2005; van der Kolk, 2005). Further, affected children often demonstrate difficulties with attachment, anxiety, mood, eating, substance abuse, and sexual behavior/development, presenting with a

variety of psychiatric disorders (Cook et al., 2005; D'Andrea et al., 2012; Spinazzola et al., 2005). Thus, the need to describe and measure a more developmentally appropriate symptom profile is warranted.

Hypotheses

The current study attempts to explore the possibility that there may be childhood experiences that fall outside of the traditional rubric for DSM-defined traumatic events and still be experienced as traumatic. Thus, this study examined the frequencies of reported potentially traumatic experiences (PTEs) in addition to the frequencies of events defined as traumatic by PTSD Criterion A.

Additionally, the item format most conducive to reporting these events was explored. The current study hypothesized that more PTEs would be reported on a measure using open-ended questions than on a questionnaire with closed-ended questions, given that measures assessing for PTEs typically utilize open-ended questions and measures assessing for DSM-defined events typically use closed-ended questions.

Lastly, we explored the hypothesis that multiple and/or chronic trauma experiences are predictive of a distinct set of symptom criteria, DTD (van der Kolk, 2005). We predicted that individuals who endorsed multiple or chronic trauma experiences would be more likely to endorse DTD symptoms.

Method

Participants

As a first step in assessing a variety of potentially traumatic experiences or stressors during childhood, only 18- and 19-year-olds participants were included to ensure that the events in question were relatively recent. Participant age range was limited in order to assess adults who were least distant from their exposure to potentially traumatic events. Participants consisted of 186 volunteers from introductory psychology courses at a medium-sized, northwestern university; 73.3% were female, and 26.2% were male. Ninety-one percent identified as white, and 94.7% reported a heterosexual identity.

Measures

Item analysis was performed on seven existing trauma history questionnaires, and the two questionnaires covering the most PTSD Criterion A events were combined, edited for redundancies, and used to control for exposure to PTSD Criterion A events. The University of California Los Angeles Posttraumatic Stress Disorder Reaction Index (UPRI; Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) covered the majority of PTSD Criterion A events, and those not covered by the UPRI were covered by the Trauma History Questionnaire (THQ; Green, 1996). Twenty-five PTSD Criterion A categories were comprised by the two measures (Table 1).

UCLA PTSD Reaction Index for DSM-IV—Child Version, Revision 1, Part 1 (UPRI; Pynoos, et al., 1998). The UPRI is a self-report inventory of trauma exposure and symptoms in youth. It has good psychometric properties (Cronbach's alpha = 0.90; test-retest reliability =

0.84; Steinberg, Brymer, Decker, & Pynoos, 2004). The response format was modified to that of the Trauma History Questionnaire, described below (THQ; Green, 1996).

Trauma History Questionnaire (THQ; Green, 1996). The THQ is a self-report inventory of trauma exposure and symptoms. The response format asks whether the event happened, how many times it happened, and at what ages. The test-retest reliability coefficient ranged from .51 (close person killed) to 1.0 (seen dead bodies; Green, 1996). Only items from the THQ not already covered by the UPRI were added to create the URPI-THQ.

Potentially Traumatic Experiences Questionnaire (PTEQ; unpublished measure). In order to assess for the influence of item format on reported traumatic experiences and to address limitations of current measures, the authors created two versions of the PTEQ for the current study. Item creation for the PTEQ-C involved independent, inductive creation of PTE category lists, utilizing relevant research outlining events youth may consider traumatic (e.g., Cloitre et al., 2009; Spinnazola et al., 2005). Both sets of items were submitted to a panel of three trauma experts and doctoral graduate students for their assistance in editing wording, eliminating redundancies, and providing general feedback. The trauma experts all lead trauma research labs and were located in universities in different parts of the United States (e.g., southwest; northwest; southeastern [national trauma center]). Items were edited based on the panel's suggested revisions, resulting in 26 items covering 25 categories (one category required two separate questions; Table 2). None of the PTEQ-C items were represented on the URPI-THQ. The response set mirrored that of the THQ. Doctoral graduate students also inductively constructed and vetted items on the PTEQ-O and the DTDQ (described below).

The PTEQ assesses for various childhood PTEs (e.g., peer-victimization, divorce, etc.); however, one version of the questionnaire (PTEQ-C) included only closed-ended, behaviorally specific questions. For example, “Before you turned 18 years old, were your parents ever divorced or separated?” The open-ended version of the PTEQ, the PTEQ-O, included five questions about experiences in which participants 1) felt their life was threatened, 2) felt they or someone close to them may be or was seriously injured, 3) experienced something extraordinarily stressful, 4) felt upset about something that happened to their family or community before they were born, or 5) any other experience they felt was very difficult (Table 3).

Developmental Trauma Disorder Questionnaire (DTDQ; unpublished measure). In order to assess for DTD symptom criteria (van der Kolk, 2005), the authors developed three experimental questions. The questions assessed for symptom criteria B, C, and D of DTD, which address emotional dysregulation in response to trauma cues, altered attributions, and functional impairment, respectively. Items were vetted through a panel of experts in identical fashion to the PTEQ-C. A higher frequency of item endorsement indicated greater severity in symptomology. See Table 4 for the full DTDQ. Readers may contact the primary author for the complete assessment battery.

Procedure

Introductory Psychology students were given a description of the study, which described a survey in which they would be asked about “common difficult experiences (including extremely stressful or traumatic experiences like sexual, physical, or emotional abuse) and problems these experiences may have caused for you.” Participants self-selected into the study

by signing up for time slots as one option for completing their research requirement. They were provided informed consent, and all participants anonymously completed the Demographic Form, UPRI-THQ, and DTDQ. Half of the participants were randomly assigned to complete the PTEQ-C, which was counterbalanced with the UPRI-THQ. The other half of participants completed the PTEQ-O, which was not counterbalanced, given the phrasing of the questions. This study was approved by the University's institutional review board.

Data Analysis

To establish a frequency count of PTEs reported on the PTEQ-O, participants' responses were coded by matching them to the inductively established PTE categories of the PTEQ-C. Next, the remaining responses were assigned codes based on consensus by the first and second authors.

In order to examine the third hypothesis, items on the PTEQ-C, PTEQ-O, and UPRI-THQ were coded for chronicity, using the frequency count, which indicated how many times a person experienced a particular event on the PTEQ-C and UPRI. Frequency counts were totaled across all measures to form the 'chronicity' score, where higher scores indicated that a participant experienced more than one PTE or experienced a PTE multiple times. Univariate analysis of variance (ANOVA) was used to determine differences between demographic variables and the other variables of interest (chronicity, DTDQ score) so that demographic variables found to be related to outcome variables would be controlled in the regression model. Stepwise regression was used to determine the model of best fit to explain the variance found in DTD scores.

Results

Following the inductive coding of PTEs on the PTEQ-O, additional categories identified included: *significant other injured, loved one in the military, romantic breakup, financial debt, being adopted, estranged family member, church excommunication, fear of crime-related trauma, fear of injury in other, living in an unsafe community, and death of a pet*. Out of 25 possible PTE categories, participants who completed the PTEQ-C endorsed events in 23 of these categories (559 total reports of PTEs, derived from the frequency count; see Table 2). Approximately half of the sample did not report experiencing a PTE (53%, $n = 99$), while 2.7% ($n = 5$) reported experiencing only one trauma type. One participant (0.5%) had missing data. The remaining 44.9% reported experiencing more than one trauma type.

Of those who completed the PTEQ-O, 12 of the 25 PTEQ-C categories were reported (120 total reports of PTEs, derived from the frequency count), and 11 new categories were identified. Sixty-nine percent of participants ($n = 129$) did not endorse experiencing a PTE on the open-ended questionnaire, 15% of participants ($n = 28$) endorsed only one trauma type, 0.5% of participants had missing data ($n = 1$), and the remaining 15.5% endorsed multiple trauma types. See Table 3 for reported frequencies, means, and standard deviations for PTEQ-O items.

On the URPI-THQ, participants across both groups endorsed 24 out of 25 possible categories of PTSD Criterion A traumatic events (592 total reports of Criterion A events, derived from the frequency count; see Table 1). Approximately 16% of the participants ($n = 31$) did not endorse any items, 18.7% of participants ($n = 35$) reported experiencing only one trauma type, 2.1% of

participants ($n = 4$) had missing data, and the remaining 62.6% of the sample endorsed more than one trauma type.

It was hypothesized that participants would report significantly more PTEs on the open-ended version of the PTEQ than on the closed-ended version. Conversely, the results indicated that, on average, participants given the PTEQ-C reported a greater number of PTEs ($M = 6.08$, $SE = 0.16$) than participants given the PTEQ-O ($M = 1.28$, $SE = 0.46$). This difference was significant $t(184) = -9.90$, $p < .001$ and represented a large effect size, $r = 0.59$.

Finally, it was hypothesized that higher scores on the trauma exposure measures (i.e., multiple and/or chronic exposure) would predict higher scores on the DTD experimental symptom questionnaire. The ANOVA results demonstrated that the ethnicity, gender, and sexual orientation variables had significant differences in terms of chronicity and DTDQ scores. Post-hoc analyses revealed that female participants reported significantly higher DTDQ scores than male participants ($p < .05$). There were no significant differences by gender in chronicity. Non-White and non-heterosexual participants reported significantly higher DTDQ scores than their White and heterosexual counterparts ($p < .05$, respectively). Non-heterosexual participants also reported significantly higher chronicity scores than heterosexual participants ($p < .05$).

A stepwise regression was used to explore if multiple/chronic trauma experiences predicted endorsement of the DTD experimental symptom questions (Table 5). Given the results of the ANOVA, the URPI-THQ Total Score was entered as the first step on the regression, to control for exposure to Criterion A traumatic experiences; gender, ethnicity, and sexual orientation were entered into the second step; and lastly, the chronicity score was entered on the third step. The results of the regression indicated that the UPRI-THQ Total Score accounted for a significant

amount of the variance observed in the DTDQ total score, as predicted. Further, the inclusion of gender into the model resulted in a statistically significant change in R-square (R-square change = .03, $p < .05$). The other demographic variables, sexual orientation and ethnicity, were not included in the final model, as they did not provide additional prediction. Finally, the chronicity score did significantly predict DTDQ total scores independent of the other predictors in the model ($\beta = .22$, $p < .001$). In sum, the model accounting for the most variability in DTDQ score included URPI-THQ score, gender, and chronicity score and accounted for nearly 43% of the variability observed.

Discussion

The findings of this study supported the hypothesis that there are a variety of events considered traumatic in childhood that are not typically considered traumatic according to the DSM-5 PTSD Criterion A definition. Additionally, this study demonstrated that item format should be considered in childhood trauma exposure measures. This research also provides empirical support for the proposed DTD symptom criteria (van der Kolk, 2005). Overall, these results contribute to the understanding of complex trauma and associated psychological sequelae (Cook et al., 2005; D'Andrea et al., 2012; Spinazzola et al., 2005; van der Kolk, 2005).

This study has important implications for theory, assessment, diagnosis, and future research. Given that a total of 120 reports of PTEs were recorded on the PTEQ-O and a total of 559 reports of PTEs were recorded on the PTEQ-C, the results substantiate the well-known finding that individuals experience a variety of distressing life events in their youth. This provides

further support for future revisions of the DSM to include a developmentally appropriate diagnosis for symptoms related to the experience of multiple, distressing childhood experiences that do not necessarily meet PTSD Criterion A (D'Andrea et al., 2012). Further, the sheer number of experiences reported supports the argument that standard trauma assessment should allow for reporting subsequent symptoms on multiple/chronic experiences, rather than on the most difficult only. Indeed, the accumulation of traumatic experiences could result in unique symptoms beyond that and/or separate from symptoms of PTSD.

The comparison of open- to closed-ended questions provided additional information about trauma exposure assessment. Although it was hypothesized that the open-ended questionnaire would result in higher reporting rates of PTEs, the results indicated that the closed-ended questionnaire yielded significantly higher reporting rates. This may be due to the fact that it is easier to circle “yes” than to write a response. The lower yield of reporting on the PTEQ-O may also be explained by the tendency to utilize avoidance as a coping mechanism for difficult experiences (Pineles, Street, Mostoufi, Ready, Griffin, & Resick, 2011). Additionally, all completers of the PTEQ-O were presented with the URPI-THQ first, which may have influenced how participants evaluated the description “very stressful” on the PTEQ-O. However, the reporting of several events on the open-ended version that were not included on the closed-ended version provided support for the inclusion of at least one open-ended or catch all question to ensure that less commonly reported experiences are captured.

Finally, this study provided empirical support of a relationship between complex or multiple traumas and the experience of unique psychological sequelae. It was found that URPI-THQ score, gender, and chronicity score accounted for the most variability in DTDQ score. The

role of gender is consistent with previous research indicating that females are at greater risk of developing PTSD and other disorders following trauma exposure (Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, & Best, 2003). The empirical support for the proposed DTD symptoms found in the current study indicate that this disorder should be considered for inclusion in future revisions of trauma-related disorders in the DSM. As argued by D'Andrea et al. (2012), a developmentally appropriate diagnosis based upon exposure to interpersonal trauma, victimization, and neglect during childhood would enable clinicians to identify and understand the role of childhood trauma in psychopathology, particularly since the PTSD criteria does not sufficiently address the symptom presentation of children and adolescents with complex trauma histories (Schmid et al., 2013). Inclusion of DTD in psychiatric diagnostic manuals may enhance treatment selection and outcomes, as treatment is likely to be incomplete when the traumatic origins of a complex symptom presentation are not recognized, and the presence of multiple diagnoses obfuscates treatment planning, execution of intervention strategies, and may be stigmatizing (Cloitre et al., 2009; D'Andrea, 2012; Herman, 1992). Finally, incorporation of a DTD diagnosis will guide researchers and clinicians in developing effective treatments. With effective treatment, implications include early intervention and positive outcomes for the child, the family, and society. Further, having this type of diagnosis available will guide the development of specific interventions, insurance reimbursements, and future scientific inquiry (Cloitre et al., 2009; D'Andrea et al., 2012; Schmid et al., 2013).

It has been argued that childhood victimization is the most significant and costly issue facing public health (D'Andrea et al., 2012), and prevention of these problems and their subsequent costs begins with identification. Further, a diagnosis such as DTD will reduce pathologizing the

set of behaviors developed by complex trauma survivors in that they will no longer be labeled with a number of diagnoses that often stigmatize them as “bad kids” (Cloitre et al., 2009; D’Andrea et al., 2012). Indeed, without the availability of a diagnosis like DTD, the field of psychology may be inadvertently causing children with complex trauma histories more harm both by giving them multiple diagnoses and not treating the trauma.

Limitations

The limitations of this study include the sampling procedure, retrospective reporting, and the use of previously unvalidated measures, which were not counterbalanced for the entire sample. The sampling procedure was limited in that participants were university students of the specified age group (18-19 year olds) who self-selected into the study, and their responses were based on retrospective reports. Therefore, it may be difficult to generalize these findings to a larger population. Indeed, the use of retrospective measures has been criticized in past research such that recall of traumatic events may not be accurate (Rosen, 2004-2005). However, researchers have concluded that there is good to excellent reliability in adult retrospective reports on childhood abuse (Dube, Williamson, Thompson, Felitti, & Anda, 2005), and at worst adults may underreport events (Fergusson, Horwood, & Woodward, 2000). Therefore, the current study likely provides valuable information despite the retrospective nature of the survey. This research is also limited in that the study used two previously unvalidated measures, the PTEQ and the DTDQ. However, these measures were reviewed by an expert panel and were a first step in better addressing the limitations of current trauma exposure measures. Lastly, the study is limited in that the PTEQ-O and the UPRI-THQ were not counterbalanced, as the two measures were counterbalanced with the closed-ended version. This was unavoidable, however, in order to

reduce redundancy between completing the PTEQ-O first, and possibly listing out Criterion A events and then completing the UPRI-THQ.

Future Directions

Although this research provides information about young adults' retrospective accounts of what they consider traumatic, it does not provide information regarding what youth consider traumatic during their childhood. The next, logical phase of this research would be to empirically assess for PTEs and DTD utilizing the measure developed in the current study in child populations. Limited research with child populations on complex trauma has been conducted, though differences in measuring both exposure to PTEs and developmentally-appropriate symptoms of exposure present methodological problems. Future research should also incorporate an ethnically diverse sample, which will increase understanding of the differences amongst ethnic groups in trauma exposure and DTD symptoms. Given that the experience of trauma in childhood has profound implications on child development, it is imperative that mental health professionals, teachers, and policy makers understand these developmental implications so that trauma in children is detected early, reliably, and identified children can receive the appropriate services (Richardson et al., 2008). Lastly, future research should examine the symptoms of childhood complex trauma reactions into adulthood, as the effects of such trauma are both profound and long-standing. Indeed, the ACE study demonstrated that the experience of multiple childhood stressors is known to be associated with a wide array of health difficulties into adulthood (Felitti, et al., 1998). Further, 61-76% of adults with borderline personality disorder (BPD) have a history of childhood abuse (Harned & Linehan, 2008). Thus, longitudinal studies on DTD are needed as

it is likely that DTD criteria may be applicable throughout the lifespan, rather than limited to child populations.

Appendix A

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Table 1

Reported Frequencies of PTSD Criterion A Traumatic Experiences with Item Exemplars

Item	A1 Trauma Type	Frequency (N=186)	Mean	SD
1	Natural Disaster (earthquake)	11	.06	.24
2	Natural Disaster (other)	31	.17	.37
3	Accident	41	.22	.42
4	War Zone	0	.00	.00
	Exemplar: "Have you ever been in a place where a war was going on around you?"			
5	Physical abuse	30	.16	.37
6	Witness domestic violence	27	.15	.35

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7	Experience community violence	38	.26	.89
8	Witness community violence	49	.26	.44
9	Witness dead body	28	.15	.36
10	Sexual assault	18	.10	.30
11	Learn about violent death of loved one	87	.47	.50
12	Scary medical treatment	37	.20	.40
13	Mugging with force	4	.02	.15
14	Robbing of person	25	.14	.34
15	Robbing of other's home	26	.14	.35
16	Robbing of home	10	.05	.23
17	Man-made disaster	12	.06	.25

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18	Exposure to radioactive material	7	.04	.19
19	Homicide survivor	24	.13	.34
20	Death of spouse, child, romantic partner	2	.01	.10
21	Experience life-threatening illness	13	.07	.26

Exemplar: "Have you ever had a serious or life-threatening illness?"

22	Sexual abuse with force	10	.05	.23
23	Sexual abuse without force	23	.12	.33
24	Physical assault with a weapon	11	.06	.24
25	Physical assault without a weapon	27	.15	.35

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Table 2

Reported Frequencies of Potentially Traumatic Experiences (PTEs) with Item Exemplars from PTEQ-C

Item	PTE Type	Frequency (N = 93)	Mean	SD
1	Illness (significant other)	60	.77	1.18
2	Multiple moves	37	.63	1.62
3	Living with MI/Sub abuse	22	.24	.43
<p>Exemplar: “Did you live with someone who had a mental illness and/or used drugs or alcohol where it caused trouble at home?”</p>				
4	Sig other in prison/commit crime	16	.17	.38
5	Pregnancy	2	.02	.15

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6	Having an abortion	1	.01	.10
7	Giving a child up for adoption	0	.00	.00
8	Miscarriage	2	.02	.15
9	Parents divorce	23	.25	.43
10	Caregiver with multiple dating partners	3	.03	.18
11	Physical bullying	25	.27	.45
			.90	1.1
12	Relational bullying	73		3
			.89	1.1
13	Verbal bullying	71		4
	Cyberbullying (someone pretended to be you, steal		.12	.33
14	information)	11		
15	Cyberbullying (someone spread gossip about you,	19	.20	.41

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threatened you)

16	Hazing	14	.15	.36
17	Dating violence	28	.30	.46
18	Hate crime	11	.12	.33
19	Physical neglect	3	.03	.18
20	Emotional neglect	15	.16	.37
21	Emotional abuse	21	.23	.42
<p>Exemplar: “Did you ever feel that someone in your family strongly disliked you, or did people in your family say hurtful things to you, like “you’re ugly/stupid,” or swear at you?”</p>				
22	Sibling abuse	12	.13	.34
23	Exposure to pornography	2	.02	.15

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24	Historical trauma	21	.23	.42
25	Removal from home	0	.00	.00
26	Attempted suicide of loved one	34	.37	.49

Note: MI=Mental illness; Sub=Substance; Sig=Significant.

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Table 3

Reported Frequencies of Open-Ended Questions from PTEQ-O

Item	Question	Frequency (N=93)	Mean	SD
1	Were you ever in any situation in which you feared you or someone close to you might be killed, or did someone close to you die or was killed?	26	.28	.45
2	Were you ever in any situation in which you feared you or someone close to you might be or was seriously injured?	36	.39	.49
3	Did you ever experience any other extraordinarily stressful	40	.43	.50

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situation or event?

Before you were born, did

something happen to your

.12

.33

family or your community

4 that was very difficult for you?

11

Did anything else happen to

you in your childhood that was

.35

.48

really hard that you did not talk

5 about in the previous questions?

33

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Table 4

Developmental Trauma Disorder Questionnaire (DTDQ)

Item	Frequency (N= 186)	Mean	SD
1. When you were reminded of what happened to you, did you have trouble with any of the following? (Check all that apply):			
Your mood or controlling your emotions (sadness, angry, anxiety)?	80	.43	.50
Physical problems such as stomachaches, headaches, trouble with movement, frequent illness?	25	.13	.34
Acting out what you went through when engaged in imaginary play (pretend playing)?	9	.05	.22
Hurting yourself in some way, such as cutting,	20	.11	.31

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scratching, poking, pulling out your hair?

Feeling like you were reliving what you went through (back in the moment), confusion, feeling detached or like you were watching yourself from a distance?	53	.28	.45
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Being clingy with your caregiver/other adult, misbehaving, trouble trusting, others, trying to be the 'perfect' child?	40	.22	.41
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2. Since this has happened to you, did you...

(Check all that apply):

Feel hate or disgust towards your self, blame yourself/feel guilty for what happened to you?	48	.26	.44
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Lose trust in people who were supposed to care for you?	67	.36	.48
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Expect that what happened to you would happen again?	53	.28	.45
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Think that you would not be protected in the future because of what happened to you? 24 .13 .34

3. Did these experiences cause difficulty for you in any of the following areas? (Check all that apply):

At home with your family? 73 .39 .49

At school with grades or behavior? 51 .27 .45

With your friends? 69 .37 .45

With the law? 17 .09 .29

With your job? 6 .03 .18

Table 5

Predicting DTDQ scores According to Chronicity of Traumatic Experiences

	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
Step 1				0.37
Constant	1.32	.29		
URPI-THQ	0.64	.06	0.61***	
Step 2				0.39
Constant	1.70	.31		
URPI-THQ	0.63	.06	0.60***	
Gender	-1.31	.45	-0.17*	
Step 3				0.43

Constant	1.63	.30	
URPI-THQ	0.51	.07	0.49***
Gender	-1.31	.44	-0.17**
Chronicity	0.02	.01	0.22**

Note: $\Delta R^2 = .03$ for Step 2 ($p < .05$). $\Delta R^2 = .04$ for Step 3 ($p < .01$). * $p < .05$; ** $p < .01$; *** $p < .001$. Gender coded as '0' for females and '1' for males.