Psychological Assessment
2011, Vol. 23, No. 2, 463–477

DOI: 10.1037/a0022294

Development and Validation of a Brief Self-Report Measure of Trauma Exposure: The Trauma History Screen

Eve B. Carlson
National Center for Posttraumatic Stress Disorder, Menlo Park, California; and VA Palo Alto Health Care System, Palo Alto, California

Steve R. Smith
University of California at Santa Barbara

Patrick A. Palmieri
Summa Health System, Akron, Ohio

Constance Dalenberg
Alliant International University and Trauma Research Institute

Josef I. Ruzek and Rachel Kimerling
National Center for Posttraumatic Stress Disorder, Menlo Park, California, and VA Palo Alto Health Care System, Palo Alto, California

Thomas A. Burling
VA Palo Alto Health Care System, Palo Alto, California

David A. Spain
Stanford University School of Medicine

Although information about individuals' exposure to highly stressful events such as traumatic stressors is often very useful for clinicians and researchers, available measures are too long and complex for use in many settings. The Trauma History Screen (THS) was developed to provide a very brief and easy-to-complete self-report measure of exposure to high magnitude stressor (HMS) events and of events associated with significant and persisting posttraumatic distress (PPD). The measure assesses the frequency of HMS and PPD events, and it provides detailed information about PPD events. Test–retest reliability was studied in four samples, and temporal stability was good to excellent for items and trauma types and excellent for overall HMS and PPD scores. Comprehensibility of items was supported by expert ratings of how well items appeared to be understood by participants with relatively low reading levels. In five samples, construct validity was supported by findings of strong convergent validity with a longer measure of trauma exposure and by correlations of HMS and PPD scores with posttraumatic stress disorder (PTSD) symptoms. The psychometric properties of the THS appear to be comparable or better than longer and more complex measures of trauma exposure.

Keywords: traumatic stress, traumatic stressors, PTSD, posttraumatic, self-report

Exposure to sudden, highly stressful events is fairly common among the general population in the United States (Breslau, 2002) and is even more frequent among those seeking mental health treatment (Jacobson, 1989). Information about exposure to sudden, severe stressors is clinically important because such exposure has been found to be associated with increases in later psychological disorder (Brown, Fulton, Wilkeson, & Petty, 2000; Bryant et al., 2010) and decreases in physical health (Schnurr & Green, 2004),

This article was published Online First April 25, 2011.

Eve B. Carlson, Dissemination and Training Division, National Center for Posttraumatic Stress Disorder, Menlo, California, and VA Palo Alto Health Care System, Palo Alto, California; Steve R. Smith, Department of Counseling, Clinical, and School Psychology, University of California at Santa Barbara; Patrick A. Palmieri, Center for the Treatment and Study of Traumatic Stress, Summa Health System, Akron, Ohio; Constance Dalenberg, California School of Professional Psychology, Alliant International University and Trauma Research Institute; Josef I. Ruzek and Rachel Kimerling, Dissemination and Training Division, National Center for Posttraumatic Stress Disorder, and VA Palo Alto Health Care System; Thomas A. Burling, Domiciliary Care Services, VA Palo Alto Health Care System, Palo Alto, California; David A. Spain, Department of Surgery, Stanford University School of Medicine.

This work was supported, in part, by National Institute of Mental Health Grant MH 69876 awarded to Eve B. Carlson. We wish to thank Donn Garvert, Jordan Edwards, Bonnie Sullivan, Abbey Durkin, Marianne Kabour, Rob Wheeler, and Luma Muhtadie for their work on the research and all of the research participants who generously contributed their time and effort for the good of others.

Correspondence concerning this article should be addressed to Eve B. Carlson, National Center for Posttraumatic Stress Disorder (334-PTSD), 795 Willow Road, Menlo Park, CA 94025. E-mail: eve.carlson@va.gov

occupational functioning (Zatzick et al., 2008), and socioeconomic well-being (Zielinski, 2009). In prospective studies and meta-analyses of trauma research, psychological disorders found to increase the most following highly stressful events include depression, generalized anxiety disorder, posttraumatic stress disorder (PTSD), agoraphobia, phobia, and substance abuse (Brown et al., 2000; Bryant et al., 2010; Reed, Anthony, & Breslau, 2007). In addition, repeated, severe, sudden stressors that occur during early childhood are thought to play a role in the development of borderline personality disorder (Herman & van der Kolk, 1987), some dissociative disorders (Dell, O'Neil, & Somer, 2009), and proposed diagnoses of developmental trauma disorder (van der Kolk et al., 2009) and complex PTSD (Ford & Courtois, 2009).

Although the potential impact of highly stressful events is considerable, exposure and responses to them often goes undetected among those seeking psychiatric treatment. For example, in one study of psychiatric outpatients, 71% of those found to have experienced a major physical or sexual assault had not reported the event to a previous therapist (Jacobson, 1989). Furthermore, assessment of exposure to sudden, severe stressors is not routinely done in clinical and research settings because available measures take too long to complete and do not assess clinically important information about the emotional impact of events. Development of a brief assessment of sudden, severe stressors (or trauma exposure) that yields clinically useful results could expand assessment of trauma exposure to a wider range of settings.

A major challenge in assessing exposure to severe stressors and their impact is that their severity and emotional impact vary considerably. Some types of stressors, such as earthquakes and car accidents, can be devastating but can also be very minor stressors. The emotional impact of moderately severe stressors depends, to a large extent, on the subjective perceptions of the person who has the experience (Kilpatrick, Resnick, & Acierno, 2009). As a result of variability in subjective perceptions and a number of other factors, after similar events, some people experience little or no distress, some experience distress that lasts a few days or a few weeks, and some experience significant distress that persists for months or even years. Persistent distress in the form of PTSD following exposure to a sudden, severe stressor has been found to increase risk for PTSD following exposure to a subsequent stressor (Breslau, Peterson, & Schultz, 2008). If a measure could provide information about exposure to stressor events and about the severity and duration of emotional responses to stressful events, clinicians could use the information to better understand the psychological problems of clients and to formulate diagnoses and treatment plans. Researchers could use such information to study the variability in exposure to events and responses and extend our understanding of why some events cause traumatic stress in some individuals. Also, research on the long-term effects of traumatic stress could be expanded if a sufficiently rapid method of quantification was available.

Because differentiating among stressors associated with different types of response is an important aspect of the Trauma History Screen (THS), we define terms to describe them. Adopting the term used in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV*; American Psychiatric Association, 1994) field trials for PTSD (Kilpatrick et al., 1998), we use *high magnitude stressors* (HMSs) to refer to sudden events that have been found to cause extreme distress in most of those exposed. The term *traumatic stressor* (TS) is used to describe HMS events that caused extreme distress for an individual. Events associated with significant subjective distress that lasts more than a month are referred to as *persisting posttraumatic distress* (PPD) events. The distress associated with PPD events could take the form of PTSD symptoms but could also manifest as other anxiety symptoms, depression, or other behavioral disorders.

Several self-report measures have been developed over the past 15 years to assess exposure to HMSs that could be traumatic. These measures are generally referred to as trauma exposure measures, but most do not assess whether events were associated with significant or lasting psychological distress (TS or PPD events). Norris and Hamblen (2004) reviewed seven self-report measures of traumatic events. Most survey a broad range of potential HMSs and ask questions about each. For each endorsed event, additional questions are then asked to determine whether the event involved actual or threatened death or injury, which is criterion A1 for PTSD in the *DSM–IV*. Norris's (1990) Traumatic Stress Schedule includes four items to assess reexperiencing, avoidance, and arousal symptoms in response to the worst stressor but does not assess the duration of these responses.

All seven exposure measures reviewed by Norris and Hamblen (2004) require reading a large number of words, and most have fairly high reading levels and complex structures. Most of these seven measures also ask for some details of any events endorsed. This approach means that respondents must read a large amount of text and answer sets of questions about events that were not significantly distressing to them. For example, people who experienced a minor earthquake that was only mildly distressing would need to answer five questions about the event when completing the Traumatic Life Events Questionnaire (TLEQ) and eight questions on the Traumatic Events Questionnaire (Vrana & Lauterbach, 1994). To complete the briefest available measure (the Stressful Life Events Screening Questionnaire; SLESQ), respondents must read 593 words (Goodman, Corcoran, Turner, Yuan, & Green, 1998), even if they experienced no HMS events. Of the U.S. general population, about half endorse one or more events (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995) and need to read more than the minimum number of words. A much higher proportion of those seeking mental health services need to read more than the minimum.

The THS (see Appendix A) was developed to provide a very brief measure with a simple format and an easy reading level to assess exposure to HMS, TS, and PPD events. It is intended for use in research and in a wide variety of clinical and nonclinical populations. This article describes the development and content validation of the THS along with studies of its psychometric properties in five samples: a clinical sample expected to have high levels of exposure and relatively low reading levels, a sample of people recently exposed to TSs, and three nonclinical samples. Content validation of a trauma exposure screen is challenging because many common methods for establishing content validity do not apply to measures that assess experiences, rather than a theoretically defined construct or attribute. Nonetheless, we applied several of the procedures for content validation recommended by Haynes, Richard, and Kubany (1995), including a systematic approach to (a) specifying the intended functions of the measure, (b) specifying the target domains to be assessed and their dimensions, (c) specifying the methods used to create the measure

items, and (d) explaining how the structure and instructions correspond with the domains assessed.

Method

Methods relating to development of the measure and methods common to the individual study samples are described below. Study-specific methods are described in later sections.

Targeted Domains and Dimensions

The THS was developed to quickly assess exposure to a broad range of HMS, TS, and PPD events. Since the priority in design was brevity, we included a smaller number of items that were more global rather than a larger number that were more specific. To determine the specific types of stressors to be assessed, we examined the measures available at that time (the late 1990s) and selected stressors that were included on all of the measures. The measures examined included the Traumatic Stress Schedule (Norris, 1990), the Trauma History Questionnaire (Green, 1996), the Traumatic Events Questionnaire (Vrana & Lauterbach, 1994), and the Trauma Assessment for Adults—Self-Report (Resnick, Falsetti, Kilpatrick, & Freedy, 1996). Additional methods we used to determine the types of stressors to be assessed included rational deduction, clinical experience, suggestions by expert colleagues, and application of theories relevant to the domain of traumatic stress. The primary theoretical basis for selecting stressor categories was that suddenness, lack of controllability, and a strong negative valence are all necessary (but not sufficient) characteristics for an event to cause traumatic stress (Carlson, 1997; Carlson & Dalenberg, 2000; Carlson, Furby, Armstrong, & Shlaes, 1997). Findings from the empirical literature relevant to the impact of HMSs and assessment of traumatic stress were also taken into account. For example, we decided to assess only violent child physical and sexual assault because research has shown violent physical and sexual abuse to be associated with posttraumatic stress symptoms, whereas abuse of lower severity (e.g., getting spanked, single incident fondling) was not (Carlson et al., 2001). It should be noted that the THS was not intended to function as a screen for all types of childhood abuse or stressful life events. Use of the THS cannot replace assessment of physical or sexual abuse or other major life stressors for clinical or research purposes.

The specific types of stressors identified by the process above and targeted by THS items includes the Events A–L listed on the THS in the Appendix. In response to a reviewer suggestion and poor test–retest agreement in the homeless veterans sample, the HMS item assessing child physical abuse was changed from "getting beat up or attacked as a child" for Studies 1 and 3 to "hit or kicked hard enough to injure—as a child" for Studies 2 and 4. The item for adult physical assault was also changed. Additional items were later added to assess sudden moves or the loss of home and possessions and sudden abandonment by family or loved ones. Such experiences are common for refugees, survivors of natural disasters and war, and for children in low socioeconomic status families. They meet our definition of TSs as sudden, uncontrollable events with high negative valences (Carlson & Dalenberg, 2000). In both cases, the events involve sudden threat of or actual extreme psychological pain rather than threat of injury or death. Shalev and Ursano (2003) also included these experiences in a discussion of stressor elements that are traumatizing but that do not necessarily involve threat of injury or death. Expert survey results reported elsewhere indicate that these new items are considered capable of causing PTSD by the majority of trauma experts (Carlson & Smith, 2011). Analyses of responses to these two items are reported in the results of Studies 2 and 4.

Additional dimensions are assessed for events that respondents found highly distressing. These include *DSM–IV* Criteria A1 (involved threat of or actual death or injury) and A2 (involved a subjective response of fear, helplessness, or horror). Questions are also included to assess the duration and severity of subjective distress, which can be used to identify events associated with PPD.

Design and Structure of the THS

The primary goals in designing the THS were to create an instrument that could assess exposure to HMS, TS, and PPD events (a) at a very easy reading level, (b) in a very short amount of time, and (c) in a way that does not require respondents to make complex judgments. A very easy reading level was desirable so that the THS would be appropriate for the widest possible clinical and research populations. The Flesch-Kincaid Grade Level of the THS is 5.5, and the Flesch-Kincaid reading ease score is 77.3. Reading ease scores range from 0 to 100, with higher scores indicating that text is easier to understand. Expert ratings were collected of Study 1 participants' comprehension of items.

The screen is separated into two parts, with a gate question between the first and second parts. See Appendix for the first page of the THS. Three additional boxes identical to those on the first page are on page 2 of the THS. A second page with six additional boxes should be added when assessing in clinical settings. The THS requires reading 200 words to complete the HMS checklist and the gate question for TSs, which is approximately one third of the words of the briefest published measure (Goodman et al., 1998). The gate question after the HMS checklist is designed to narrow the focus of respondents' attention to events that were significantly distressing. Completing the set of questions about a stressor identified as having "really bothered" a person requires reading 104 words. Assuming an average adult reading rate of 200 words per minute, it would take less than 1 min to read the first section of the THS and less than 1 min to read questions for each stressor described in a box. Additional time savings are achieved because respondents do not need to consider and respond to HMSs that were not very distressing. Time to complete the measure is described in the results of Study 4.

Psychometric Studies: Design, Planned Statistical Analyses, and Hypotheses

The psychometric properties of the THS were studied in samples of homeless veterans in a residential rehabilitation program (Study 1), hospital patients with traumatic injuries and family members of injured patients (Study 2), female university students (Study 3), and adults and young adults from a community (Study 4). We chose these samples because we sought to investigate the reliability and validity of reports on the THS in both clinical and nonclinical populations. For all data analyses, the number of HMS events is the total number of events reported on the initial checklist. The number of TS events is the number of events described in

boxes. The number of PPD events is the number of events that involved actual or threatened death or injury (Criterion A1); experience of fear, helplessness, or horror (Criterion A2); duration of distress of 1 month or more; and severity of distress of *much* or *very much*.

Data were transformed in all studies to reduce distortion of statistical values by extreme outliers. This was particularly necessary for HMS scores, as some participants exposed to repeated stressors such as childhood abuse or combat experiences reported very high HMS levels. We transformed outliers using Winsorization, which has the advantage of being intuitively clear while retaining all data and their magnitudes (Jackson, 1986; Sheskin, 2003). We used a 95th percentile Winsorization in which outliers beyond the 95th percentile in a set of scores are replaced by the score for the 95th percentile.

Reliability. To investigate the temporal stability (test–retest reliability) of reports on the THS, we examined the consistency of reports of veterans, university students, and young adults over a 1 or 2 week period and reports of hospital trauma participants over a 2 month period by calculating percentage absolute agreement and kappa coefficients of agreement for reports of HMS and PPD events. We also examined test–retest correlations for HMS and PPD report totals. Internal reliability was not studied because it is not appropriate for measures of experiences because they are not necessarily expected to show high internal consistency.

Rates of HMS and PPD events. To investigate the validity of THS reports, we examined the reported rates of HMS and PPD events in all five samples. We also report on the potential impact of the proposed omission of Criterion A2 for the *DSM–5* (Friedman et al., in press). Rates of TS are not presented because they were very similar to PPD rates, but less clinically relevant. We expected to see high rates for both HMS and PPD events in the homeless veterans and relatively low rates in the university students and the young adults. We expected the rates of exposure to HMSs in the university students, young adults, and adults to be comparable with those found using other exposure measures in studies of similar nonclinical populations. HMS levels in the adult community sample and hospital trauma sample were expected to be somewhat higher than levels for university and young adults because they were, on average, older and had lived more years in which exposure might occur.

Convergent validity. We investigated convergent validity by comparing veterans', adults', and young adults' reports of HMS and PPD events on the THS to reports on another trauma exposure measure and investigated criterion-related validity by examining veterans' reports of military stressors to official combat service records. The relations between reports of HMS events and levels of PTSD symptoms were also studied as indicators of convergent validity in all three samples. We expected low to moderate-sized relationships, with less strong relationships in the samples with more restricted range (students and young adults). We also compared PTSD symptom levels of those reporting any PPD events to those reporting no such events in all samples and expected to find differences across the two groups for all samples. In samples of university students, young adults, and adults, we also compared PTSD symptom levels of those reporting HMS events to those reporting no such events and expected to find differences in mean PTSD levels.

Study 1: Homeless Veterans

Study 1 was designed to investigate the reliability and validity of THS reports in a sample of persons likely to have high levels of trauma exposure and relatively low reading levels. In addition, it is important to investigate the reliability and validity of the THS in assessing veterans and men, as both are populations commonly exposed to traumatic stress. In a sample of homeless veterans, we examined the temporal stability of HMS and PPD reports, the reported rates of HMS and PPD events, the criterion-related validity of reports of military HMS events, and the convergent validity of HMS and PPD event reports with reports on a longer measure and with PTSD symptoms. We also collected and analyzed expert ratings of participant item responses to examine participants' comprehension of THS items.

Method

Participants. Participants were 115 veterans from a residential rehabilitation program for homeless veterans. All were unemployed and homeless upon entering the program, which focuses on practical aspects of obtaining work and a stable living situation. Psychiatric treatment is not a focus of the program, and veterans with severe psychiatric disturbances (e.g., psychosis) are not admitted. In the study, 95.7% of participants were male and had a mean age of 45 years ($SD = 6.3$). About half (46%) were divorced, 35% were single, 10% were separated, 4% were widowed, and 4% were married; 47% were African American, 46% were Caucasian, and 7% were of other ethnicities. The majority (60%) served in the 1970s, 18% served in the 1960s, and 18% served in the 1980s. Military service in a combat zone was determined through Department of Veterans Affairs (DVA) service records when available. Of the 96 veterans for whom combat service could be determined, VA records indicated that 10 (10.4%) served in a combat zone.

Diagnoses noted by case manager at discharge were 70% alcohol abuse or dependence, 80% other drug abuse or dependence, 28% affective disorder, 5% PTSD, and 90% personality disorder (mostly NOS, mixed, narcissistic, antisocial, avoidant, borderline). Two (1.8%) were receiving compensation for service-connected PTSD, three (2.7%) for other psychiatric conditions (dysthymia, bipolar disorder, and nervous condition), and 16 (14.6%) for medical conditions. Current resident participants had been participating in the program for an average of 141 days ($SD = 70.4$), and length of stay was not significantly correlated with PTSD symptoms ($r = -.05$, *ns*).

Procedures. Participants were approached no earlier than 1 week after entering the program in order to allow time for stabilization for those who had been living in the streets. Participants were recruited at a regularly scheduled meeting of all program residents or by notes left in their mailboxes. After providing informed consent, participants completed all measures in a paper-and-pencil format. Participants were paid $10 for their participation. Responses to completing the measures were monitored, and no participants experienced significant distress. The THS was readministered to 36 veterans 1 week after the first administration.

Materials. The PTSD Checklist—Civilian version (PCL–C) was used to assess PTSD symptoms (Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL–C is a 17-item self-report scale that inquires about how much in the past month the person has

been "bothered by" each of the 17 *DSM–IV* symptom criteria for PTSD related to a "stressful experience from the past." Response options vary from 1 (*not at all*) to 5 (*extremely*). Evidence for the reliability and validity of the PCL-C has been provided by studies of male and female veterans in primary care settings (Dobie et al., 2002; Lang, Laffaye, Satz, Dresselhaus, & Stein, 2003; Yeager, Magruder, Knapp, Nicholas, & Frueh, 2007). The PCL showed sensitivity for the diagnosis of PTSD ranging from .79 to .94 and specificity for PTSD ranging from .68 to .81. Cronbach's alpha for internal consistency reported in Vietnam veterans was .97 (Weathers et al., 1993).

The Combat Exposure Scale (CES; Keane et al., 1989) was used to assess exposure to TSs typically associated with combat. The CES has shown good temporal stability with a 1-week test–retest reliability of .97. CES scores were significantly related to PTSD diagnosis in a study of Vietnam combat veterans (Keane et al., 1989).

The TLEQ (Kubany et al., 2000) was used as a convergent measure of trauma exposure. The TLEQ is a self-report measure that assesses a broad range of potentially traumatic events in behaviorally specific terms. For 22 items, participants are asked whether a particular stressor happened, its frequency (never, once, twice, 3 times, 4 times, 5 times, more than 5 times), and whether the event evoked intense fear, helplessness, or horror. For 12 items, additional questions are asked about the event. A final item asks, "If any of these events happened to you, CIRCLE the number of the *ONE* event that CAUSES YOU THE MOST DISTRESS." In studies of university students, Vietnam veterans, battered women, and residential substance abuse patients, temporal stability of TLEQ items was good to excellent, with kappa coefficients of .40 for most and .60 or higher for half of the items (Kubany et al., 2000). In university students, disclosure agreement between an earlier version of the TLEQ and a structured interview with the same content ranged from adequate to substantial across different events with kappas of .40 or higher on 15 of 16 items (Kubany et al., 2000).

Results

Reliability. Reports on the first and second administration of the THS for 36 veterans were examined to assess temporal stability over 1 week. For each of the 12 HMS event items, the percent of absolute agreement for report of one or more of that type of event was calculated. The median and range for absolute agreement (in percent) for the 12 HMS items is shown in Table 1. For each of the 12 HMS event items, a kappa coefficient of agreement for reports of one or more of that type of event were also calculated. The median and range for these item kappas are shown in Table 1. Kappa values were .5 or higher (moderate) for 11 of 12 of the HMS items and .7 or higher (substantial) on six of 12. Only the child physical abuse item had a kappa value below .5. Agreement was only fair ($\kappa = .22$) on the "beat up as a child" item. For this item, 21 of 36 respondents were consistent across administrations in reporting the occurrence of one or more such event. A revised version of this item was used in Studies 2 and 4.

Because the kappa statistic is very sensitive to low values in the marginals (Pett, 1997) and because the vast majority of respondents did not report PPD events for most item types, PPD reports for the 12 items were collapsed into seven categories for the purpose of calculating values of absolute agreement and kappas (accidents, disasters, interpersonal violence, death, military trauma, witnessed trauma, and other). The median and range for percent of absolute agreement for report of one or more PPD events for the seven event categories is shown in Table 1. Kappas for PPD disasters and "other" events were not calculated due to very low marginal values. The median and range for kappas for the remaining PPD event categories are shown in Table 1. Kappa values were .59 or higher (moderate) for four categories and .75 or higher (substantial) for three categories.

Table 1
Test–Retest Reliability of High Magnitude Stressor (HMS) and Persisting Posttraumatic Distress (PPD) Event Reports

Measure	Homeless veterans	Hospital trauma	University students	Young adults
Median % absolute agreement for HMS	86	86	96	96
Range	61–100	62–100	90–100	75–98
Median κ for HMS	.70	.61	.74[a]	.74[a]
Range	.22–1.0	.22–.81	.71–.89	.61–.92
Median % absolute agreement for PPD categories	87			
Range	74–92			
Median κ for PPD categories	.75			
Range	.46–.79			
Test–retest for total HMS score	.93***	.74***	.87***	.77***
Test–retest for total PPD score	.73***	.95***	.82***	.73**

Note. For homeless veterans, $n = 36$; for hospital trauma participants, $n = 21$; for university students, $n = 120$; and for young adults, $n = 55$. The test–retest interval was 1 to 2 weeks for Studies 1, 3, and 4 and 2 months for Study 2.
[a] Calculated based on trauma category endorsement.
** $p < .01$. *** $p < .001$.

The 1-week test–retest reliability of HMS and PPD category scores and total HMS and total PPD event scores were examined for the veterans who completed the screen twice. Total PPD event scores were not available for 12 of 36 subjects at one or both time points because they reported multiple, chronic exposure to stressors (child physical abuse, military violence) over a period of years rather than a specific number of events. Test–retest reliability of HMSs by category ranged from .79 to .85 for disasters, interpersonal violence, military trauma, and witnessed trauma. Test–retest reliabilities were lower (.11 to .38) for sudden deaths, "other" events, and accidents. Lower reliabilities were largely due to individuals who reported events in different categories at the two time points. For example, on the first administration, one participant reported 10 deaths and no "other events," but on the second administration, he reported the same 10 deaths as "other events." After removing these cases (three for deaths, one for accidents, and one for "other" events analyses), reliabilities for sudden deaths, other events, and accidents ranged from .62 to .89. Test–retest correlations were not calculated for PPD category scores because of the highly restricted range and extreme positive skew in their distributions. Table 1 shows that the correlations for test–retest reliability of total HMS (.93) and total PPD event scores (.73) were very strong.

Reported rates of HMS and PPD events. Descriptive statistics on HMS and PPD event reports are shown in Table 2. No total number of HMSs was obtained for four participants because they made checks in the blanks instead of writing numbers. Ninety-eight percent of respondents reported one or more HMSs, and 75% reported over eight HMSs. The most frequently endorsed types of event were sudden death of a close friend or relative (77%), seeing someone badly hurt or killed (73%), adult physical assault (68%), attack with a weapon (68%), child physical assault (61%), and natural disasters (60%). No total number of PPD events was obtained for 11 participants because they reported ongoing violence over a period of years (mostly child physical abuse and military or gang violence) without specifying a number of events. One or more PPD events were reported by 82.6% of respondents, one or two PPD events were reported by 30.7%, and three or more PPD events were reported by 51.8% of respondents. The most frequently endorsed events that met PPD criteria were sudden death of a close friend or relative (43%), military traumas (25%), child physical assault (25%), adult physical assault (23%), and seeing someone badly hurt or killed (21%).

Convergent validity. The convergent validity of the THS was investigated by comparing THS reports of stressful military events with official records of combat service and reports of exposure to combat on the CES. DVA records of whether a veteran had served in a combat zone was available for 96 of the veterans. Of these, three veterans reported high levels of military trauma but gave no estimate of frequency. Veterans who served in combat zones according to official DVA records reported significantly more military HMS events ($n = 9$, $M = 5.78$, $SD = 6.69$) than did other veterans ($n = 83$, $M = 1.61$, $SD = 4.13$), $t_{HMS}(92) = 2.69$, $p < .01$. Reported military HMS and PPD events were very strongly and significantly correlated with reports of exposure to military stressors on the CES ($r_{HMS} = .81$, $p < .001$; $r_{PPD} = .57$, $p < .001$).

To examine the convergent validity of the THS, we compared scores on the THS with scores on a more lengthy published measure of traumatic life events, the TLEQ. To compare overall reports of HMSs on the THS and the TLEQ, we calculated HMS scores for the THS to match the response format and scoring of TLEQ. Because highest response on the TLEQ is *more than five times*, THS items with HMS reports higher than five were given a score of six. The correlation of HMS scores on THS and TLEQ was $r(111) = .77$, $p < .001$. Comparison of the performance of specific THS and TLEQ items was not possible because similar items assess somewhat different realms of experiences.

To examine consistency in reports about the most distressing events across measures, we compared responses with TLEQ item 23 (which one event "causes you the most distress") to events described in the THS boxes. Of the 110 participants who circled an event in TLEQ Item 23, 107 participants (97%) were consistent in their reports. Nine reported that the event circled on the TLEQ was minimally distressing and reported no events in THS boxes, and 98 reported in a THS box the same event identified as causing the most distress on the TLEQ.

We examined the convergent validity between the THS and the related construct of PTSD by correlating the frequency of HMS and PPD reports and scores on a measure of PTSD symptoms (see Table 3). The relationships observed were small to moderate in size. Participants reported high levels of PTSD symptoms with PCL-C scores well distributed across the range between 17 and 68 ($M = 42.2$, $SD = 16.3$). As evidence of the validity of PPD event reports, we compared PTSD symptom levels of veterans reporting no PPD events ($n = 20$) to those reporting one or more PPD events ($n = 94$; see Table 4). The difference in PCL-C scores between these groups was not statistically significant, due to participants with high PCL-C scores who reported no PPD events. Six veterans who reported no PPD events had PCL-C scores of 50 or higher. A similar comparison was not conducted for HMS endorsement because too few participants reported no HMS events.

Expert ratings of item comprehension. To investigate comprehension of the very brief THS items, we collected expert ratings of the descriptions participants wrote to describe THS events that "really bothered" them (TS and PPD events). We selected responses from the sample of homeless veterans because that sample was expected to have the lowest reading level, based on research findings of low literacy levels in populations of indigent persons with psychiatric disorders (Andrus & Roth, 2002; Christensen & Grace, 1999). To determine a representative sample of responses to rate, we randomly selected up to 20 descriptions designated as corresponding to a particular THS item. We selected only the first description in a given category for each respondent. For the item "forced sex—as a child," we selected descriptions provided by the student participants in Study 3 because the veterans reported very few of these experiences.

Fifteen experts on traumatic stress who were all current or former members of the Board of Directors of the International Society for Traumatic Stress Studies and whose primary language was English completed ratings. We asked experts to "rate each response to indicate whether it seems to describe an event in the domain indicated." Because we sought to assess whether participants understood what domains were being inquired about as opposed to whether participants could correctly categorize events into the most specific domains possible, we further instructed experts to "focus on whether the response does seem to describe an event in the indicated domain, rather than whether an event might be more specifically categorized." A sample inquiry was "Does the

Table 2
Reported Rates of High Magnitude Stressor (HMS) and Persisting Posttraumatic Distress (PPD) Events

Measure	Homeless veterans	Hospital trauma	University students	Young adults	Adults
HMS mean	29.0	7.2	3.5	6.1	9.5
SD	33.4	7.6	4.5	5.9	9.6
HMS median	16	5	2	4	6
HMS mode	13	2	0	0	0
HMS range	0–229	0–55	0–35	0–71	0–93
PPD events mean	7.16	1.84	0.45	0.58	1.1
PPD events median	3	1	0	0	1
PPD events mode	0	0	0	0	0
PPD events range	0–125	0–27	0–32	0–6	0–8
% Reporting ≥ 1 HMS events	98.0	90.6	72.4	82.0	87.0
% Reporting ≥ 1 PPD events	82.6	69.0	31.6	37.8	55.2

Note. For homeless veterans, $n = 115$; for hospital trauma, $n = 160$; for university students, $n = 210$; for young adults, $n = 255$; and for adults $n = 115$.

Table 3
Relationships of High Magnitude Stressor (HMS) and Persisting Posttraumatic Distress (PPD) Events to PTSD Symptoms

Relationhip	Homeless veterans	Hospital trauma	University students	Young adults	Adults
$r_{HMSs \times PTSD}$	.41***	.33***	.22**	.34***	.32***
$r_{PPDs \times PTSD}$	.25**	.38***	.18**	.30***	.37***

Note. For homeless veterans, $n = 115$; for hospital trauma, $n = 125$; for university students, $n = 210$; for young adults, $n = 255$; and for adults, $n = 115$. PTSD symptoms were assessed with the PCL–C for the homeless veteran and university samples and with the SPTSS for the hospital trauma, young adult, and adult samples. PTSD = posttraumatic stress disorder; PCL–C = PTSD Checklist—Civilian version; SPTSS = Screen for Posttraumatic Stress Symptoms.
** $p < .01$. *** $p < .001$.

response seem to describe exposure to a **transportation accident**?" Response options were 0 = no, 1 = it is unclear, and 2 = yes. For each response rated, criteria were set for whether the item appeared to be understood. For each response rated, we concluded that the item was adequately understood when at least 70% of the 15 experts rated a response a 2 (yes) and no more than 15% of the 15 experts rated a response a 0 (no). We considered overall comprehension of an item for all respondents to be acceptable if the item was understood by at least 70% of all respondents. Eleven of the 12 items met this criterion with a mean of 82% of responses apparently understood. The item "seeing someone badly hurt or killed" was rated as understood for 60% of responses. Rater comments indicated that it was sometimes unclear if the event described was in the domain of "seeing someone badly hurt or killed" because it was not clear from the description alone if the respondent was present when the injury or death occurred.

Study 2: Hospital Trauma Sample

The purpose of Study 2 was to investigate the reliability and validity of THS reports in a sample of participants from a nonclinical, community sample. We studied patients who had been seen at a Level I trauma center and hospitalized with traumatic injuries and family members of other traumatically injured patients who had been exposed to this HMS but not injured themselves. To examine reliability, we studied the temporal stability of HMS and PPD reports. To investigate convergent validity of HMS and PPD reports, we examined the reported rates of HMS and PPD events and examined how these reports related to PTSD symptoms.

Method

Participants. Participants were 160 adults who were treated for injuries in a university hospital trauma center and admitted for at least 1 day or were family members of admitted trauma patients. Participation was limited to those exposed to stressors that met *DSM–IV* Criteria A1 (involved actual or threatened death or injury) and A2 (fear, helplessness, or horror in response to event; American Psychiatric Association, 1994). The majority (57%) of the participants were patients, and 43% were first degree relatives or significant others of admitted patients. Patients and family members were compared on background variables (including past exposure to HMS and PPD events) and psychological symptoms (including PTSD), and the only difference found was that patients showed higher levels of past year alcohol use. In this study, therefore, patients and family members were studied as a group. Participants ranged in age from 16 years to 85 years, with a mean age of 43 years ($SD = 14.0$), and 44% were male. The majority was Caucasian (63%), with 7% Asian, 16% Hispanic, 4% African American, 5% multiracial, and 4% declining to state race/ethnicity. The majority of patients (65%) were in serious motor vehicle accidents, 32% had an accident at work or home, and 7% were attacked with a gun or knife. The majority of family members (59%) had loved ones who were in serious motor vehicle accidents.

Procedures. In the context of research on early responses to traumatic stress, participants completed a variety of paper-and-pencil questionnaires about demographics, life history, pretrauma psychological symptoms, current stress, and psychological re-

Table 4
Comparison of PTSD Symptoms in Those With None Versus One or More High Magnitude Stressor (HMS) and Persisting Posttraumatic Distress (PPD) Events

	HMSs					PPDs				
	None		One or more			None		One or more		
Sample	*M*	*SD*	*M*	*SD*	*t*	*M*	*SD*	*M*	*SD*	*t*
Homeless veterans					—	38.3	17.1	42.6	15.5	1.10
Hospital trauma					—	8.11	9.6	14.9	11.1	3.45**
University students	25.6	9.13	27.3	10.2	1.04	25.0	9.0	31.0	10.6	3.87***
Young adults	7.0	7.2	10.9	8.5	2.83**	8.1	7.0	13.6	9.4	4.96***
Adults					—	7.5	8.7	11.1	9.2	2.13*

Note. PTSD symptoms were assessed with the PCL–C for the homeless veteran and university samples and with the SPTSS for the hospital trauma, young adult, and adult samples. Dash in the *t* column indicates that *t* was not calculated due to low *n* in the group with no HMS events. Dash in the *M* and *SD* column indicates that PTSD = posttraumatic stress disorder; PCL–C = PTSD Checklist—Civilian version; SPTSS = Screen for Posttraumatic Stress Symptoms.
* $p < .05$. ** $p < .01$. *** $p < .001$.

sponses to the event. Measures were completed within 2 weeks of coming to a Level I trauma center as a patient or family member. A follow-up measure of PTSD was completed 2 months following the event that brought the participant to the hospital. During 4 months of data collection, participants also completed the THS for a second time 2 months postevent. Responses to completing the measures were monitored, and no participants experienced significant distress.

Materials. Data from the THS and the Screen for Posttraumatic Stress Symptoms (SPTSS) are reported here. The SPTSS is a 17-item self-report measure of the *DSM–IV* PTSD symptoms that has shown good reliability and validity (Carlson, 2001; Caspi, Carlson, & Klein, 2007). Response options were 0 = *not at all*, 1 = *1 or 2 times*, 2 = *almost every day*, 3 = *about once every day*, and 4 = *more than once every day*.

Results

Reliability. Twenty-one (13%) of 160 participants completed the THS at baseline and 2 months postevent. The median and range for absolute agreement (in percentages) for the 12 HMS items are shown in Table 1. Due to low marginal values, some items were combined into categories for the purpose of calculating kappa values. HMS items for childhood violence (sexual and physical) were combined, as were HMS items for adult interpersonal violence (sexual, physical, and threat with a weapon). Kappa was not calculated for military trauma as none of the 21 participants reported any military HMSs at either administration. The median and range of kappa values for nine categories are shown in Table 1. Kappa values for the nine categories were .5 or higher (moderate) for eight of the nine categories and .7 or higher (substantial) for three of the eight categories. The kappa value for the "other trauma" item was .22. For this item, 13 of the 21 respondents were consistent across administrations in their reports. Kappa values were not calculated on PPD event items or categories due to low marginal values.

The test–retest reliability over 2 months of total HMS and total PPD event frequencies is shown in Table 1. Test–retest correlations for both scores were very high (.74 and .95).

Reported rates of HMS and PPD events. Reported frequencies of HMS and PPD events are shown in Table 2. The event that brought the participant to the trauma center was not included because too little time had passed to assess severity and duration of the response. One or more HMS items (other than recent event) were endorsed by 90.6% of the participants, and 56% endorsed 4 or more. The most frequently endorsed types of trauma were sudden death of a close friend or relative (56%), bad motor vehicle accident (50%), natural disaster (46%), and some other event that scared them badly (38%). No PPD events were reported by 33% of the participants, 26% reported one PPD event, 24% reported two or three PPD events, and 17% reported four or more PPD events.

Convergent validity. For evidence of convergent validity, we examined the relation between reports of HMS and PPD events and scores on a measure of PTSD symptoms completed 2 months following the traumatic injury that brought them to the hospital. SPTSS scores were available for 125 of the participants and showed significant small to medium-sized correlations with HMS and PPD scores (see Table 3). We also compared 2-month PTSD symptom levels of hospital participants reporting none versus one or more PPD events. SPTSS scores were significantly lower in those reporting no PPD events than in those reporting one or more PPD events (see Table 4). We examined participants' reports 2 months after the event on a THS box completed in reference to the event that brought them to the trauma center. Participants whose THS reports at 2 months indicated that the recent event was a PPD scored significantly higher on the SPTSS, $t(76) = 2.23$, $p < .03$, than participants whose THS reports indicated that the recent event was not a PPD. Similarly, 75% of the participants who met criteria for PTSD 2 months following the event rated the event as a PPD, whereas only 53% of participants who did not meet criteria for PTSD rated the event as a PPD.

Comparison of original and revised physical abuse and assault items. Responses to the two versions of child and adult physical assault items were compared for 128 participants who responded to the original version and 30 participants who responded to the revised version. The original child assault item was endorsed by 22.6%, and the revised child assault item was endorsed by 26.6%. The original adult assault item was endorsed by 20.9%, and the revised adult assault item was endorsed by 16.7%.

Study 3: Midwestern University Students

The purpose of Study 3 was to investigate the reliability and validity of THS reports in a nonclinical sample of participants who are likely to have relatively low levels of trauma exposure. We examined the temporal stability of reports of HMS and PPD in a sample of female students of a large, Midwestern university. To investigate convergent validity, we examined the reported rates of HMS and PPD events and examined how these reports related to PTSD symptoms.

Method

Participants. Two hundred ten female students of a large, Midwestern university participated and received partial course credit for Psychology 100. Only women were sampled because the data were collected to study measure psychometrics and to identify a subsample of women exposed to sexual assault. The participants had a mean age of 18.5 years ($SD = 1.1$). Most were freshmen (73.3%), followed by sophomores (17.3%), juniors (7.6%), and seniors (1.9%). The majority was Caucasian (60.5%), with 18.1% Asian, 8.6% Hispanic, and 7.1% African American, and 5.7% reported being of another race or multiracial.

Materials and procedures. The THS and PCL-C (described in the Method section of Study 1) were administered to all participants. After providing informed consent, participants completed a variety of questionnaires in large group sessions. A subset ($n = 131$) who had volunteered to participate in additional research were scheduled for a second session 7 days later, and 120 attended this session. In both sessions, the THS was administered after measures of demographics, life satisfaction, and various symptom measures (dissociation, anxiety, worry, and mood). For Session 1, a personality measure was also completed before the THS. Responses to completing the measures were monitored, and no participants experienced significant distress. Findings relevant to the current study only are reported here.

Results

Reliability. The median and range for absolute agreement (in percentages) across the two administrations for the 12 HMS items is shown in Table 1. Because the marginals for six HMS items were three or fewer, HMS reports for the 12 items were collapsed into six categories for the purpose of calculating kappas (accidents, disasters, interpersonal violence, death, witnessed trauma, and other). Kappa was not calculated for military trauma as only two of 120 students reported any military HMSs at either administration. The median and range of kappa coefficients for the six categories are shown in Table 1. Kappas for all categories were .70 or higher (substantial). Kappa values were not calculated on PPD event items or categories due to low marginal values.

Test–retest correlations for 11 HMS items ranged from .60 to 1.00 with a mean of .80 and median of .74. A test–retest correlation was not calculated for military trauma because 118 of 120 participants reported no military trauma events. The test–retest reliability over 1 week of total HMS and total PPD event frequencies is shown in Table 1. Test–retest for HMS scores was very high (.87), and test–retest for PPD scores was high (.82).

Reported rates of HMS and PPD events. Reported frequencies of HMS and PPD events are shown in Table 2. Most (72.4%) of the participants endorsed one or more HMS items, and 31.0% endorsed 4 or more HMS items. The most frequently endorsed types of event were sudden death of a close friend or relative (48.6%), some other event that scared you badly (26.1%), bad motor vehicle accident (22.9%), natural disaster (20.1%), and seeing someone badly hurt or killed (20.0%). Most (68.4%) of the respondents reported no PPD events, 20.9% reported one, 8.2% reported two or three, and 2.5% reported four or more PPD events. No total PPD events value was obtained for four participants due to missing data for one or more of the PPD criteria.

Convergent validity. For evidence of convergent validity, we examined the relation between HMS reports and self-reported symptoms of PTSD (see Table 3). PCL-C scores ranged from 17 to 81 with a mean of 27.4 ($SD = 11.8$). Scores on the PCL-C showed significant, small correlations with total HMS and total PPD scores. We also compared PTSD symptom levels for students who reported none versus one or more HMS and PPD events. PCL-C scores of the students reporting no PPD events were significantly lower than were those of the students reporting one or more PPD events (see Table 4).

Study 4: Community Samples of Adults and Young Adults

In Study 4, we further investigated the psychometric properties of the THS with nonclinical community samples of adults. Similar to Studies 1, 2, and 3, we studied the temporal stability of HMS and PPD reports, reported rates of HMS and PPD events, relations between HMS and PPD frequency and symptoms of PTSD, and convergent validity between the THS and the TLEQ. We also compared symptom levels of those reporting one or more PPD event to those reporting none.

Method

Participants. Participants for Study 4 were undergraduate students from a midsize Western university ($n = 50$), students attending a small community college located in the same town ($n = 145$), and individuals recruited from shopping areas located in two small cities ($n = 178$). Some students received psychology course credit. Other students and community participants were compensated with a $5 gift card. To determine whether participants should be grouped by recruitment setting (college or university vs. community) or by age (young adults aged 18–22 vs. adults 23 and older), we compared HMS scores across settings and age groups. HMS scores were not significantly different across recruitment setting, $t(371) = .35$, *ns*, but were significantly different across age groups, $t(371) = 2.6$, $p < .01$. Therefore, we grouped these participants by age for all analyses.

Young adults (255) had a mean age of 20 years ($SD = 1.2$) and reported racial/ethnic identities of White (59.9%), Hispanic/Latino (21.0%), Asian (10.3%), African American (4.8%), and other and mixed race (4.0%), and 39.0% were male (61% were female). Adults aged 23 years and older ($n = 118$) had a mean age of 35 years ($SD = 13.0$) and reported racial/ethnic identities of White (61.3%), Hispanic/Latino (19.4%), Native Hawaiian (6.5), Asian (5.6%), African American (2.4%), and other and mixed race (4.8%), and 43.3% were male (56.7% were female).

Materials and procedures. Of the measures used in the above studies, all participants completed the THS and SPTSS. The THS version used with these samples included the two additional HMS event options: "Sudden move or loss of home or possessions" and "Sudden abandonment by spouse, partner, parent, or family." A subset of university student participants also completed the TLEQ. For these participants, the THS was either the first measure in the packet of measures (with TLEQ last) or the last (with TLEQ first). Participants were randomly assigned to complete the THS first or the TLEQ first.

After providing informed consent, participants completed a variety of questionnaires, including measures of demographics, attitudes, and various symptom measures (affective lability, PTSD, and dissociation). A subset of the college sample completed the THS twice, with a 1-week interval between administrations. Responses to completing the measures were monitored, and no participants experienced significant distress.

Results

Time to complete the THS. The time to complete the THS was measured for 39 Study 4 participants. The time to complete ranged from 0.83 min to 15.2 min, with a mean of 4.3 min and a median of 4.0 min. Ninety percent of these participants completed the THS in 8 min or less. Participants reported a mean of 5.8 HMS events (range: 0 to 34; $SD = 7.07$) and 0.9 PPD events (range: 0 to 7; $SD = 1.53$). Eighty-seven percent of these participants reported one or more HMS events, and 38% reported one or more PPD events. The mean minutes to complete was 3.1 ($SD = 2.39$) for those reporting no PPDs and 6.0 ($SD = 4.02$) for those reporting one or more PPDs, and this difference was significant, $t(37) = 2.75$, $p < .009$.

Reliability. Using the same methodology as Study 3, we examined the temporal reliability of the THS over a 1-week interval in a subset of young adults ($n = 55$; see Table 1). Because of low marginal values for 6 HMS items, HMS reports were collapsed into six categories for the purpose of calculating kappas (accidents, disasters, interpersonal violence, death, witnessed

trauma, and other trauma). Kappa and percent agreement scores for HMS events were quite strong. Kappa values for the six categories were .55 or higher (moderate) for five of the categories and .84 or higher (substantial) for three of the categories. Correlations for the total HMS and PPD scores were also high and statistically significant.

Reported rates of HMS and PPD events. Reported frequencies of HMS and PPD events for young adults and adults are shown in Table 2. For young adults, the most frequently endorsed HMS events included natural disasters (54%), sudden death of family or friends (46%), other events (36%), transportation accidents (26%), and physical assault as an adult (20%). The distribution of HMS events for the adult and young adult samples was nearly identical.

To examine whether revised items for child physical abuse and adult physical assault were endorsed at comparable rates to the original versions of the items, we calculated endorsement rates for the revised versions of these items. Of 255 young adults, 18.8% endorsed the revised child assault item, and 20.8% endorsed the revised adult assault item. Of 118 adults, 18.6% endorsed the revised child assault item, and 15.4% endorsed the revised adult assault item.

Endorsement rates were also examined for sudden loss of home/community and sudden abandonment. Of 255 young adults, 16.5% endorsed the loss of home item and 15.6% endorsed the abandonment item. Of 118 adults, 20.3% endorsed the loss of home item, and 21.2% endorsed the abandonment item. To examine whether these two types of trauma were associated with similar levels of PTSD symptoms as other types of events, we compared PTSD symptom levels of adults reporting a single PPD event for loss of home or abandonment to those reporting a single PPD event for any other item. Adult and young adult samples were combined in order to have a sufficient number of participants in the smaller group to conduct the analysis. SPTSS scores of the 10 participants reporting a single loss of home or abandonment event ($M = 13.2$, $SD = 11.3$) were not significantly different than those of the 72 participants reporting one or more of other types of PPD events ($M = 11.5$, $SD = 10.4$) $t(80) = 0.49$, *ns*.

Convergent validity. Correlations between symptoms of PTSD and HMS and PPD event reports and are shown in Table 3. Low to moderate, significant correlations were found for both age groups. Order effects (THS or TLEQ first) were examined and found to have no effect on SPTSS scores. In both groups, SPTSS scores were compared for those who reported zero versus one HMS event and for those who reported zero versus one PPD event (See Table 4). In both groups, SPTSS scores were significantly lower for those reporting no PPD events, and they were significantly lower for those reporting no HMS events for the young adults. The analysis was not conducted for HMS in adults.

As in Study 1, we calculated correlations between the THS and the TLEQ. After converting the scores of the THS to be consistent with the TLEQ scores, we calculated correlations between total scores on the measures for both the young adult and adult groups. For the THS, the total HMS score was used, and for the TLEQ, the total score for items corresponding to those on the THS was used. The total scores on the two measures were strongly related for both the young adults, $r(254) = .73$, $p < .001$, and adult groups, $r(95) = .76$, $p < .001$.

In addition, percentage absolute agreement was calculated by category for the TLEQ and the THS for accidents, disasters, interpersonal violence, military trauma, witnessing death or injury, death of a loved one, and other traumas. In the young adult sample, these ranged from 71% to 96%, with a median of 78%. In the adult sample, these ranged from 66% to 77%, with a median of 72%. Comparisons of the performance of specific THS and TLEQ items were not conducted because comparable items assess somewhat different realms of experiences.

Discussion

Results of analyses for the four studies provide strong support for the reliability and validity of the THS. Expert ratings of responses to items indicated that THS items were well understood by participants with relatively low levels of education, and the measure was completed in less than 8 min by 90% of participants in a small, nonclinical sample.

Reliability

The temporal stability of THS reports studied in four samples were good to excellent with median rates of absolute agreement for HMS items ranging from 85% to 96% and median kappa coefficients of agreement for HMS items ranging from .61 to .77. These results show substantial levels of agreement in reports of HMS items at the two time points and compare favorably to the stability of items assessing exposure to HMSs on more lengthy trauma exposure measures, such as the SLESQ (mean item kappa of .70 in a college student sample; Goodman et al., 1998) and the TLEQ (mean kappas for items of .52 to .63 in three clinical samples; Kubany et al., 2000). The overall stability of total number of HMSs reported was excellent for homeless veterans ($r = .93$). In nonclinical samples, temporal stability of total HMS scores was also very good, ranging from .74 to .87. The stability of PPD reports was also quite good, with mean kappa values across PPD items of .68 for veterans' reports and test–retest correlations ranging from .73 to .95.

Validity

Overall, the construct validity of THS reports were supported by the results of a variety of analyses in the five samples. Item comprehension was supported by analyses of expert ratings of item responses by participants with relatively low reading levels. Overall, ratings from a fairly large sample of experts indicated that respondents understood the intended meanings of the very brief THS items.

The rates of lifetime exposure to any HMSs for the five samples were consistent with results of previous research. In our student sample (Study 3), 72% reported one or more HMS events compared to rates in past college student samples of 72% (Goodman et al., 1998) and 84% (Vrana & Lauterbach, 1994). In our young adult sample, one or more lifetime HMS was reported by 80% of our young adult sample and 85% of our adult sample. Large epidemiological studies of adult representative of the U.S. population have found lifetime rates of exposure to any HMS of 40%–60% in studies assessing a more narrow range of stressors

than the THS, and 90% in a study that assessed a broader range of stressors (Breslau, 2002).

Higher levels of lifetime exposure to any HMS were reported by hospital trauma participants (92%) and homeless veterans (98%). In addition to being more than 20 years older on average than those in the student and young adult groups, the hospital and veteran participants were exposed to unusually high levels of exposure to natural disasters due to living in an area with relatively frequent earthquakes (the San Francisco Bay area). Reported rates of exposure to natural disasters were 49% in the hospital sample and 60% in the veteran sample, compared with 17% in a large U.S. epidemiological survey (Kessler et al., 1995). Reported exposure to HMS events across samples was consistent with expectations. Students and young adults reported lower frequencies of HMS exposure than did adults who were on average 15–17 years older. The homeless veterans reported much higher frequency of HMS events than did hospital participants who were about the same age on average. The very high frequencies of HMS exposure in the veteran sample seem to accurately reflect the dangerous environments that most of the participants had been living in prior to admission to the residential rehabilitation program.

Reported rates of PPDs could not be compared with other studies because no previous studies have assessed these. Nevertheless, reported rates of lifetime PPD exposure was consistent with expectations for the five samples studied. University students and young adults reported the lowest rates and homeless veterans reported the highest. We also examined the potential impact to changes to the diagnostic criteria for PTSD (Friedman et al., 2009) on PPD reports. The proposed omission of Criterion A2 would have little effect because it changed PPD scores for only 0 to 2.4% of participants in the five samples.

The validity of HMS reports was also supported by findings of significant correlations between HMS reports and PTSD symptoms in the samples studied. In the veteran and hospital samples, total HMS scores were moderately correlated with symptoms of PTSD, consistent with a dose-effect relation between exposure to TSs and posttraumatic symptoms (Carlson & Rosser-Hogan, 1991; Mollica, McInnes, Poole, & Tor, 1998). Correlations were somewhat smaller for the university students, most likely due to the attenuating effects of the restricted range of their HMS event scores and PTSD symptom scores. The small to moderate size relations between HMS and PTSD symptoms are higher than the average correlation of $r = .12$ reported in a meta-analysis (Brewin, Andrews, & Valentine, 2000; Norris, 2002), most likely because quantifying HMS events yields a more precise index of past trauma than the count of the number of different types of trauma that is typically used as an index of past trauma exposure.

The validity of PPD reports was supported by significant correlations between PPD reports and PTSD symptoms and by the finding that PTSD symptoms were significantly higher in hospital trauma participants who rated a recent event as a PPD than in those who did not. In addition, in the homeless veterans sample, 97% of events identified as the "worst" event on the TLEQ were reported as a PPD on the THS. This is an indication that the false negative rate for the THS is low—at least for the TSs with the greatest impact. This is especially desirable in a screening measure. Validity of PPD reports was also supported by significant differences in four of the five samples between PTSD levels in those reporting no PPD events and those reporting one or more such events.

Support for the convergent validity of the THS was provided by high correlations between reports of HMS frequency on the THS and TLEQ for veterans ($r = .77$), young adults ($r = .73$), and adults ($r = .76$). Veterans' reports on the THS and TLEQ were highly consistent in regard to the most distressing events, with 97% reporting consistently about the event that caused them the most distress. Reports of military HMS events for veterans were also very strongly correlated with their reports of combat exposure on the CES ($r = .81$). Furthermore, THS reports of exposure to military HMS events were very consistent with official DVA records of service in a combat zone. Support of measure validity from analyses of reports in relation to official documents is unique among published trauma exposure measures.

Comparison of Exposure Prevalence to Reports in Previous Research

Comparison of reports of exposure to HMSs in the samples we studied to reports in previous studies is difficult because of differences in the events assessed and differences in the populations sampled. However, it is possible to compare prevalence across studies of similar populations for some events that were fairly specific and similar in the domains assessed. Table 5 shows prevalence of exposure to child physical assault, adult physical assault, and witnessing a death or injury in male and female university students studied by Goodman et al. (1998) and in young adults and adults in our Study 4 samples. Prevalence for child physical assault and adult physical assault were very similar, whereas prevalence of witnessing a death or injury was higher in the samples we studied. Our finding was, however, consistent with those of a large epidemiological sample of the U.S. general population (Kessler et al., 1995), which reported a prevalence of witnessing a death or injury of 24.6%. It seems, then, that the young adult and adult samples reported rates of very similar events comparable to previous studies.

Limitations

A potential limitation of the THS is that it has fewer items and more global items than other trauma exposure measures. The global nature of the THS items may result in some false negative reports because the items are not adequate cues for reports of some HMSs. On the other hand, other trauma exposure measures may identify many more "false positive" traumatic events because they do not assess the response to the event or assess only the short-term response and not the persisting responses. Although it was not possible to determine whether the false negative report rate is

Table 5
Comparison of Exposure Prevalence to Reports in Previous Research

Incident	Goodman et al. (1998) university students	Young adults	Adults
% Child physical assault	22.0	18.8	18.6
% Adult physical assault	18.0	20.2	15.4
% Witness death or injury	12.0	22.7	28.0

unacceptably high from data we collected, it does appear that the most distressing events on a broader measure were not "missed" in THS reports for a clinical sample. Until this issue is resolved, some researchers and clinicians might choose a longer and more detailed self-report trauma exposure measure (such as the Life Stressors Checklist—Revised or TLEQ) if they sought information about exposure to a wide range of HMSs and it were feasible to administer a longer measure. Clinicians and researchers who can only use a very brief measure or who are primarily interested in reports of exposure to events that were associated with substantial and persisting emotional distress might choose the THS.

While our findings support the reliability and validity of the THS reports, the estimates of exposure to HMSs and PPD events may not be entirely accurate. Such estimates are generally problematic because participants' ability to make very accurate frequency estimates for events that are years or decades in the past is likely to be poor. Estimates can be strongly influenced by current symptom levels (Southwick, Morgan, Nicolaou, & Charney, 1997), tendencies to exaggerate, or underreporting resulting from lack of recall (Widom, 1997). In addition, frequency estimates are especially difficult for those with histories of recurring trauma such as childhood physical or sexual abuse, adult domestic violence, or combat. For these reasons, as for other measures of trauma exposure, frequency reports of those with fewer, more recent, and more discrete events are likely more accurate than reports of those with recurring, less recent, high-frequency traumas.

In the homeless veteran sample, the scores on the PCL-C were not significantly different in the group reporting no PPD events and those reporting one or more PPD event. This was due to high PCL-C scores (50 or higher) in 6 of the 20 veterans who reported no PPD events. These 6 veterans may have been unwilling to report being bothered or to specify any details about a distressing event, or they may simply have given incomplete reports. On the other hand, reports of no PPDs could be accurate and the high PCL-C scores could be reflecting high levels of anxiety and depression unrelated to traumatic stress. Given the very stressful life circumstances of these veterans who were homeless and unemployed and their high levels of substance use disorders and personality disorders, high anxiety and depression in some of the participants would not be surprising. A third possibility is that in a context of high HMS exposure, individuals begin to respond less and less to new stressful events and may not remember their response to HMS events that happened many years ago. The mean age for the homeless veterans was 45, and 57% had first PPD events occurring before the age of 20. Given the high PTSD symptom levels in a small subset of those reporting high HMS levels and no PPDs, it seems advisable that persons reporting exposure to many HMSs but completing no boxes to describe events that "really bothered" them should be queried further by a clinician about whether any of those events were upsetting.

Procedures for Optimizing the Accuracy of THS Reports

In the population sampled with the highest levels of PPD exposure, we found that printed directions to ask for an additional page if needed to report additional events were not always followed. That is, many veterans appeared to describe events until they ran out of boxes (for a total of five), and few asked for additional pages. This pattern was evident for some who reported events in boxes in the same order (A through L) as listed at the top of the page and stopped after five categories had been covered. Others appeared to describe the first five events that came to mind that really bothered them, leading to inconsistent total scores between first and second administrations despite striking consistency in detail on events that were reported twice. Because of this pattern, we consider it important to attach a second sheet with an additional six reporting boxes when administering the THS to a clinical population.

In the samples in this study, a minority of participants put check marks instead of numbers in the blanks next to HMS items. This would not be a major concern with clinical use because it could easily be corrected. But, it could be a problem for research use: If participants could not be contacted to obtain the missing numbers, a total HMS score could not be calculated for the participant. For this reason, research staff receiving completed THS forms should pay particular attention to whether HMS blanks for numbers are completed correctly.

Conclusion

In conclusion, the analyses presented constitute extensive evidence for the reliability and validity of the THS. Although the reports obtained on the THS are constrained by all the usual sources of error relevant to self-reports and retrospective reports, its psychometric properties appear to be comparable or better than longer and more complex measures of trauma exposure. In addition, this study presents considerably more evidence for reliability and validity than is available for any other measure of trauma exposure, and comparison of some reports to official records provides a level of evidence for validity that is not available for other measures. The THS provides a good deal of information about exposure to potentially TSs and responses to stressors, is easy to comprehend, and requires relatively little time to complete. The measure allows clinicians and researchers to distinguish between HMS events that had relatively little emotional impact and PPD events that were associated with lasting, high levels of distress, and it provides detailed information about the most distressing events. The THS may be a good choice of measure when a brief, self-report measure of trauma exposure is needed.

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Andrus, M. R., & Roth, M. (2002). Health literacy: A review. *Pharmacotherapy, 22,* 282–302. doi:10.1592/phco.22.5.282.33191

Breslau, N. (2002). Epidemiologic studies of trauma, posttraumatic stress disorder, and other psychiatric disorders. *Canadian Journal of Psychiatry, 47,* 923–929.

Breslau, N., Peterson, E. L., & Schultz, L. R. (2008). A second look at prior trauma and the posttraumatic stress disorder effects of subsequent trauma: A prospective epidemiological study. *Archives of General Psychiatry, 65,* 431–437.

Brewin, C. R., Andrews, B., & Valentine, J. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68,* 748–766. doi:10.1037/0022-006X.68.5.748

Brown, S. E., Fulton, M. K., Wilkeson, A., & Petty, F. (2000). The

psychiatric sequalae of civilian trauma. *Comprehensive Psychiatry, 41,* 19–23. doi:10.1016/S0010-440X(00)90126-3

Bryant, R. A., O'Donnell, M. L., Creamer, M., McFarlane, A. C., Clark, C. R., & Silove, D. (2010). The psychiatric sequalae of traumatic injury. *American Journal of Psychiatry, 167,* 312–320. doi:10.1176/appi.ajp.2009.09050617

Carlson, E. B. (1997). *Trauma assessments: A clinician's guide.* New York, NY: Guilford Press.

Carlson, E. B. (2001). Psychometric study of a brief screen for PTSD: Assessing the impact of multiple traumatic events. *Assessment, 8,* 431–441. doi:10.1177/107319110100800408

Carlson, E. B., & Dalenberg, C. (2000). A conceptual framework for the impact of traumatic experiences. *Trauma, Violence, and Abuse, 1,* 4–28. doi:10.1177/1524838000001001002

Carlson, E. B., Dalenberg, C., Armstrong, J., Daniels, J. W., Loewenstein, R., & Roth, D. (2001). Multivariate prediction of posttraumatic symptoms in psychiatric inpatients. *Journal of Traumatic Stress, 14,* 549–567. doi:10.1023/A:1011164707774

Carlson, E. B., Furby, L., Armstrong, J., & Shlaes, J. (1997). A conceptual framework for the long-term psychological effects of traumatic childhood abuse. *Child Maltreatment, 2,* 272–295. doi:10.1177/1077559597002003009

Carlson, E. B., & Rosser-Hogan, R. (1991). Trauma experiences, posttraumatic stress, dissociation, and depression in Cambodian refugees. *American Journal of Psychiatry, 148,* 1548–1551.

Carlson, E. B., & Smith, S. R. (2011). *The clinical utility of PTSD criterion A elements*. Manuscript submitted for publication.

Caspi, Y., Carlson, E. B., & Klein, E. (2007). Validation of a screening instrument for posttraumatic stress disorder in a community sample of Bedouin men serving in the Israeli Defense Forces. *Journal of Traumatic Stress, 20,* 517–527. doi:10.1002/jts.20237

Christensen, R. C., & Grace, G. D. (1999). The prevalence of low literacy in an indigent psychiatric population. *Psychiatric Services, 50,* 262–263.

Dell, P. F., O'Neil, J., & Somer, E. (Eds.). (2009). *Dissociation and the dissociative disorders: DSM–V and beyond*. New York, NY: Routledge.

Dobie, D. J., Kivlahan, D. R., Maynard, C., Bush, K. R., McFall, M., Epler, A. J., & Bradley, K. A. (2002). Screening for post-traumatic stress disorder in female Veteran's Affairs patients: Validation of the PTSD Checklist. *General Hospital Psychiatry, 24,* 367–374. doi:10.1016/S0163-8343(02)00207-4

Ford, J. D., & Courtois, C. A. (2009). *Defining and understanding complex trauma and complex traumatic stress disorders.* New York, NY: Guilford Press.

Friedman, M. J., Resick, P. A., Bryant, R. A., & Brewin, C. R. (in press). Considering PTSD for *DSM-5. Depression and Anxiety*.

Goodman, L. A., Corcoran, C., Turner, K., Yuan, N., & Green, B. L. (1998). Assessing traumatic event exposure: General issues and preliminary findings for the Stressful Life Events Screening Questionnaire. *Journal of Traumatic Stress, 11,* 521–542. doi:10.1023/A:1024456713321

Green, B. L. (1996). Psychometric review of the Trauma History Questionnaire (Self-Report). In B. H. Stamm (Ed.), *Measurement of stress, trauma, and adaptation* (pp. 366–369). Lutherville, MD: Sidran Press.

Haynes, S. N., Richard, D. C., & Kubany, E. S. (1995). Content validity in psychological assessment: A functional approach to concepts and methods. *Psychological Assessment, 7,* 238–247. doi:10.1037/1040-3590.7.3.238

Herman, J. L., & van der Kolk, B. A. (1987). Traumatic antecedents of borderline personality disorder. In B. A. van der Kolk (Ed.), *Psychological trauma* (pp. 111–126). New York, NY: Guilford Press.

Jackson, P. R. (1986). Robust methods in statistics. In A. D. Lovie (Ed.), *New developments in statistics for psychology and the social sciences* (Vol. 1, pp. 22–43). London, England: British Psychological Society.

Jacobson, A. J. (1989). Physical and sexual assault histories among psychiatric outpatients. *American Journal of Psychiatry, 146,* 755–758.

Keane, T. M., Fairbank, J. A., Caddell, J. M., Zimering, R. T., Taylor, K. L., & Mora, C. A. (1989). Clinical evaluation of a measure to assess combat exposure. *Psychological Assessment, 1,* 53–55. doi:10.1037/1040-3590.1.1.53

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity survey. *Archives of General Psychiatry, 52,* 1048–1060.

Kilpatrick, D. G., Resnick, H. S., & Acierno, R. (2009). Should PTSD Criterion A be retained? *Journal of Traumatic Stress, 22,* 374–383. doi:10.1002/jts.20436

Kilpatrick, D. G., Resnick, H. S., Freedy, J. R., Pelcovitz, D., Resick, P. A., Roth, S. H., & Van der Kolk, B. A. (1998). Posttraumatic stress disorder field trial: Evaluation of the PTSD construct—Criteria A through E. In T. A. Widiger, A. J. Frances, H. A. Pincus, R. Ross, M. B. First, W. W. Davis, & M. Kline (Eds.), *DSM–IV sourcebook* (Vol. 4, pp. 803–838). Washington, DC: American Psychiatric Association.

Kubany, E. S., Leisen, M. B., Kaplan, A. S., Watson, S. B., Haynes, S. N., Owens, J. A., & Burn, K. (2000). Development and preliminary validation of a brief broad-spectrum measure of trauma exposure: The Traumatic Life Events Questionnaire. *Psychological Assessment, 12,* 210–224. doi:10.1037/1040-3590.12.2.210

Lang, A. J., Laffaye, C., Satz, L. E., Dresselhaus, T. R., & Stein, M. B. (2003). Sensitivity and specificity of the PTSD Checklist in detecting PTSD in female veterans in primary care. *Journal of Traumatic Stress, 16,* 257–264. doi:10.1023/A:1023796007788

Mollica, R. F., McInnes, K., Poole, C., & Tor, S. (1998). Dose-effect relationships of trauma to symptoms of depression and post-traumatic stress disorder among Cambodian survivors of mass violence. *British Journal of Psychiatry, 173,* 482–488. doi:10.1192/bjp.173.6.482

Norris, F. H. (1990). Screening for traumatic stress: A scale of use in the general population. *Journal of Applied Social Psychology, 20,* 1704–1715. doi:10.1111/j.1559-1816.1990.tb01505.x

Norris, F. H. (2002). 60,000 disaster victims speak: Part I. An empirical review of the empirical literature, 1981–2001. *Psychiatry, 65,* 207–239.

Norris, F. H., & Hamblen, J. L. (2004). Standardized self-report measures of civilian trauma and PTSD. In J. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (2nd ed., pp. 63–102). New York, NY: Guilford Press.

Pett, M. A. (1997). *Nonparametric statistics in health care Research: Statistics for small samples and unusual distributions.* Thousand Oaks, CA: Sage.

Reed, P. L., Anthony, J. C., & Breslau, N. (2007). Incidence of drug problems in young adults exposed to trauma and posttraumatic stress disorder. *Archives of General Psychiatry, 64,* 1435–1442. doi:10.1001/archpsyc.64.12.1435

Resnick, H. S., Falsetti, S. A., Kilpatrick, D. G., & Freedy, J. R. (1996). Assessment of rape and other civilian trauma-related post-traumatic stress disorder: Emphasis on assessment of potentially traumatic events. In T. W. Miller (Ed.), *Stressful life events* (2nd ed., pp. 231–266). Madison, WI: International Universities Press.

Schnurr, P. P., & Green, B. L. (Eds.). (2004). *Trauma and health: Physical health consequences of exposure to extreme stress* Washington, DC: American Psychological Association. doi:10.1037/10723-000

Shalev, A. Y., & Ursano, R. J. (2003). Mapping the multidimensional picture of acute responses to traumatic stress. In R. Orner & U. Schnyder (Eds.), *Reconstructing early intervention after trauma* (Vol. 118–129, pp. 228–235). Oxford, England: Oxford University Press.

Sheskin, D. (2003). *The handbook of parametric and nonparametric statistical procedures.* Boca Raton, FL: CRC Press. doi:10.1201/9781420036268

Southwick, S. M., Morgan, C. A., Nicolaou, A. L., & Charney, D. S.

(1997). Consistency of memory for combat-related traumatic events in veterans of Operation Desert Storm. *American Journal of Psychiatry, 154,* 173–177.

van der Kolk, B. A., Pynoos, R. S., Cicchetti, D., Cloitre, M., D'Andrea, W., Ford, J. D., & Teicher, M. (2009). *Proposal to include a Developmental Trauma Disorder diagnosis for children and adolescents in DSM–V.* Manuscript submitted for publication.

Vrana, S., & Lauterbach, D. (1994). Prevalence of traumatic events and post-traumatic psychological symptoms in a nonclinical sample of college students. *Journal of Traumatic Stress, 7,* 289–302. doi:10.1002/jts.2490070209

Weathers, F. W., Litz, B., Herman, D., Huska, J., & Keane, T. (1993). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies, San Antonio, Texas.

Widom, C. S. (1997). Accuracy of adult recollections of early childhood abuse. In J. D. Read & D. S. Lindsay (Eds.), *Recollections of trauma: Scientific evidence and clinical practice* (pp. 49–78). New York, NY: Plenum Press.

Yeager, D. E., Magruder, K. M., Knapp, R. G., Nicholas, J. S., & Frueh, C. (2007). Performance characteristics of the Posttraumatic Stress Disorder Checklist and SPAN in Veterans Affairs primary care settings. *General Hospital Psychiatry, 29,* 294–301. doi:10.1016/j.genhosppsych.2007.03.004

Zatzick, D. F., Jurkovich, G. J., Rivara, F., Wang, J., Fan, M.-Y., Joesch, J., & Mackenzie, E. (2008). A national U.S. study of posttraumatic stress disorder, depression, and work and functional outcomes after hospitalization for traumatic injury. *Annals of Surgery, 248,* 429–437.

Zielinski, D. S. (2009). Child maltreatment and adult socioeconomic well-being. *Child Abuse and Neglect, 33,* 666–678. doi:10.1016/j.chiabu.2009.09.001

Appendix

Trauma History Screen

The events below may or may not have happened to you. Circle "YES" if that kind of thing has happened to you or circle "NO" if that kind of thing has not happened to you. **If you circle "YES" for any events**: put a number in the blank next to it to show how many times something like that happened.

				Number of times something like this happened
A.	A really bad car, boat, train, or airplane accident	NO	YES	____
B.	A really bad accident at work or home	NO	YES	____
C.	A hurricane, flood, earthquake, tornado, or fire	NO	YES	____
D.	Hit or kicked hard enough to injure - as a child	NO	YES	____
E.	Hit or kicked hard enough to injure - as an adult	NO	YES	____
F.	Forced or made to have sexual contact - as a child	NO	YES	____
G.	Forced or made to have sexual contact - as an adult	NO	YES	____
H.	Attack with a gun, knife, or weapon	NO	YES	____
I.	During military service - seeing something horrible or being badly scared	NO	YES	____
J.	Sudden death of close family or friend	NO	YES	____
K.	Seeing someone die suddenly or get badly hurt or killed	NO	YES	____
L.	Some other sudden event that made you feel very scared, helpless, or horrified.	NO	YES	____
M.	Sudden move or loss of home and possessions.	NO	YES	____
N.	Suddenly abandoned by spouse, partner, parent, or family.	NO	YES	____

Did any of these things really bother you emotionally? NO YES
If you answered "YES", fill out a box to tell about EVERY event that really bothered you.

Letter from above for the type of event: ____ Your age when this happened: ____
Describe what happened:

When this happened, did anyone get hurt or killed? NO YES
When this happened, were you afraid that you or someone else might get hurt or killed? NO YES
When this happened, did you feel very afraid, helpless, or horrified? NO YES
After this happened, how long were you bothered by it? not at all / 1 week / 2-3 weeks / a month or more
How much did it bother you emotionally? not at all / a little / somewhat / much / very much

Letter from above for the type of event: ____ Your age when this happened: ____
Describe what happened:

When this happened, did anyone get hurt or killed? NO YES
When this happened, were you afraid that you or someone else might get hurt or killed? NO YES
When this happened, did you feel very afraid, helpless, or horrified? NO YES
After this happened, how long were you bothered by it? not at all / 1 week / 2-3 weeks / a month or more
How much did it bother you emotionally? not at all / a little / somewhat / much / very much

IF THERE WERE MORE EVENTS THAT REALLY BOTHERED YOU, GO TO OTHER SIDE

Figure A1. The Trauma History Screen.

Received March 8, 2010
Revision received October 13, 2010
Accepted October 13, 2010 ■