CLINICAL UTILITY AND INCREMENTAL VALIDITY OF BRIEF SCREENING
FOR TRAUMATIC EVENT EXPOSURE IN FEMALE UNIVERSITY HEALTH
SERVICE PATIENTS

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Clinical Utility of a Brief Screening Question

Abstract

Evidence suggests that routine screening of primary care patients for exposure to traumatic life events, and particularly assaultive trauma, may yield both clinical and cost benefits for healthcare systems (e.g., Green, Epstein, Krupnick, & Rowland, 1997; Lecrubier, 2004). However, although advocated by authorities, such screening has yet to be widely adopted. A sample of female university healthcare patients (N = 339) was assessed for exposure to trauma in order to examine several unaddressed issues that may diminish the clinical utility of screening for trauma in primary care patients. Because the length of the traditional trauma history assessment makes it less acceptable for use in time-pressured primary care settings, the discriminative validity of a brief, self-administered screening question about exposure to trauma, the Structured Clinical Interview for *DSM-IV* (SCID) posttraumatic stress disorder (PTSD) module's screening question (First, Spitzer, Williams & Gibbon, 1997) was compared to a longer, inventory method of assessment, the Traumatic Life Events Questionnaire (TLEQ; Kubany et al., 2000). Two versions of a brief screening question across two instructional sets were assessed to determine each condition’s relative classification accuracy for identifying respondents who reported experiences of sexual or physical assault, and/or symptoms of PTSD. The SCID screen identified more than three-quarters of the survivors of traumatic assault; and more importantly, identified all but 2 of the 47 women who met criteria for PTSD. More than 40% of the participants reported at least one physically or sexually assaultive traumatic event; and while only 4% of those reporting non-assaultive traumatic events met criteria for PTSD on the DEQ, a full one-third of assaultive-trauma survivors met criteria for PTSD. Results suggest that a brief screening question about traumatic life events may be an acceptable option in settings where more time-consuming assessment procedures are not practical. However, given the high rate of symptoms reported by female survivors of assaultive
trauma relative to nonassaultive traumatic events in this and other studies (e.g., Kessler, 2000; Lee & Young, 2001) a specific focus on screening for assaultive trauma might afford a more useful approach to trauma screening, at least among female populations. Implications and limitations of the present study are discussed, and suggestions made for the future development of optimal screening approaches for trauma exposure in primary care patients.
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Clinical Utility of Brief Screening

For Traumatic Life Event Exposure in Female University Health Service Patients

Recent evidence shows that as many as two-thirds of patients seeking medical treatment in primary care settings have experienced an event that is potentially traumatic, such as a natural disaster, a motor vehicle accident, or physical or sexual assault (Golding, Taylor, Menard, & King, 2000; McQuaid, Pedrelli, McCallhil, & Stein, 2001; Rosenberg et al., 2000). Although many individuals survive such experiences without serious consequence, a significant minority suffer adverse psychological and/or physical outcomes (Golding et al., 2000). Because of the high prevalence, detrimental risks, and health-system costs known to be associated with this group (e.g., Brunello et al., 2001; Cronkite, Samson, Bensen, Beck, Price, & Nimmer, 1999; Ouimette et al., 2004; Kimerling, 2004; Weisberg et al., 2002), many authorities have recommended routine screening of primary care patients for exposure to traumatic life events (Council on Scientific Affairs, American Medical Association, 1992; Lecrubier, 2004; Kilpatrick, Resnick, & Acienro, 1997; Litz, Miller, Ruef, & McTeague, 2002).

Although studies have confirmed that identifying primary care patients with a history of trauma exposure yields clinically useful information that might not otherwise be reported by the patient in the course of a medical visit (Leserman, Drossman, & Li, 1995; Norton, Peipert, Zierler, Lima, & Hume, 1995; Read, Stern, Wolfe, & Ouimette, 1997), several unresolved methodological issues specific to traumatic life event assessment may hinder widespread adoption of trauma screening in primary care. One question that needs to be addressed concerns the relative utility of brief versus longer approaches to the assessment of trauma history when the goal is rapid screening. The
thorough, inventory-of-events approach to trauma history assessment recommended by most trauma researchers (e.g., Resnick, Falsetti, Kilpatrick, & Freedy, 1996) is unlikely to be maintained in the time-pressured primary care setting (Maruish, 2000; Sheldon, 2000). However, while it is argued that traumatic life events cannot be adequately assessed with a brief screening question, there is some recent evidence to suggest that brief queries about trauma history may be adequate if the goal is to identify only those events associated with current impairment (Franklin, Sheeran & Zimmerman, 2002). Accordingly, one purpose of the current study is to examine the clinical utility of a brief screen for traumatic life events, relative to a longer, inventory-of-events approach.

Another unresolved question concerns the willingness of patients to disclose private or sensitive information, such as sexual assault, at a routine primary care visit. The general tendency of victims to underreport assaultive trauma¹ is widely assumed, given the large discrepancies between rates obtained by anonymous surveys and those reported by law enforcement agencies or treatment facilities (see Acierno, Resnick, & Kilpatrick, 1997, for a review). While providers often report the perception that patients do not wish to be questioned about sensitive traumatic experiences, evidence regarding

¹ Following current convention, assaultive trauma is defined to include sexual assault and abuse; physical assault or abuse, and intimate partner aggression. A distinction has been made in the current epidemiological literature between nonassaultive and assaultive traumatic life events because of the significantly higher risks of adverse sequelae associated with the latter (Breslau et al., 1998; Kessler, 2000; Kilpatrick, et al., 2003; Lee & Young, 2001; see also McQuaid, et al., 2001).
patients’ willingness to disclose these experiences in the primary care setting has largely been acquired indirectly, via patient surveys; and these have yielded conflicting results (Friedman, Samet, Roberts, Hudlin, & Hans, 1992; Walch & Broadhead, 1992). Thus, another purpose of the study is to directly examine primary care patients’ willingness to disclose experiences of assaultive trauma by assessing the relative effect on disclosure rates of informing participants that their responses will, or will not be provided to health center personnel.

Finally, although less attention to date has been given to the need for trauma screening in the college-student healthcare setting, the prevalence of traumatic life events and associated risks among college students are equivalent to those found in the general population (e.g., Fillingim, Wilkinson, & Powell, 1999); and the prevalence of some forms of assaultive trauma is higher than that of the general population. In particular, sexual assault has its highest frequency among undergraduate females (Acierno, Resnick, & Kilpatrick, 1997; Fisher, Cullen & Turner, 2000). Thus, a further purpose of the present study is to evaluate the clinical utility of screening for traumatic life events within a sample of female university healthcare clinic patients.

The following sections briefly summarize relevant literature. First, traumatic life events are defined, and the rationale for trauma history screening in the primary care setting is given. Next, methodological aspects of screening are reviewed. Finally, the questions that are the focus of the present study are examined in more detail, and the study’s specific goals are enumerated.
Traumatic Life Events

There is a long-standing debate as to what elements define an event as traumatic (Breslau, 2001), and the Diagnostic Statistical Manual of Mental Disorders (DSM) criterion defining a traumatic stressor for diagnosis of posttraumatic stress disorder (PTSD) has undergone several revisions. The current version of the DSM (DSM-IV-TR; American Psychiatric Association, 2000) includes both objective and subjective elements in its definition of a traumatic event: Criterion A1 stipulates that “the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others;” and Criterion A2 stipulates that the person’s subjective response to the A1 event must involve “intense fear, helplessness, or horror” (p. 428).

Risks Associated with Traumatic Life Events

Identification of trauma survivors is argued to be important because of the many mental and physical health risks associated with traumatic life events. First and foremost, exposure to a traumatic event is a prerequisite for the diagnosis of posttraumatic stress disorder (PTSD), a syndrome characterized by high levels of chronicity, comorbidity, and functional impairment (Amaya-Jackson et al., 1999; Dobie et al., 2004). Approximately 18% to 28% of the individuals who experience a traumatic event develop PTSD (Breslau et al., 1998).

Recently, evidence has emerged that individuals with post-traumatic symptoms that fall short of full criteria for PTSD are still at risk for substantial functional impairment (Marshall et al., 2001; Stein, Walker, Hazen, & Forde, 1997; Zlotnick, Franklin & Zimmerman, 2002; Zlotnick et al., 2004). Marshall and colleagues (2001) assessed trauma
survivors in a large community sample and found that, among individuals who did not meet
criteria for a diagnosis of PTSD, number of self-reported PTSD symptoms were
nonetheless significantly predictive of both functional impairment ($r = 0.25; p < 0.0001$)
and number of comorbid disorders ($r = 0.31; p < 0.0001$). Post-hoc analyses found
significant increases in impairment and comorbidity with each incremental increase in
number of PTSD symptoms from one to four.

Exposure to traumatic life events also poses a higher risk for the development of other
disorders, including depression (McQuaid et al., 2001), other anxiety disorders (Brown,
Campbell, Lehman, Grisham, & Mancill, 2001), and eating disorders (Laws & Golding,
1996). For example, Acierno et al. (1996) found that the risk of depression increased 300%
in lifetime physical assault victims, and 500% in recent physical assault victims, compared
to nonvictims. In a national sample of 3,006 women, the odds of receiving a diagnosis of
bulimia nervosa (via structured diagnostic telephone interview) were nearly 2 times higher
among victims of physical or sexual assault than nonvictims, after controlling for comorbid
PTSD (Dansky, Brewerton, Kilpatrick, & O'Neil, 1997; Laws & Golding, 1996)

There is also considerable evidence that physical health can be adversely affected by
exposure to traumatic life events (see Green et al., 1997 for a review). Golding (1994)
analyzed data from a large epidemiological survey and found that, compared to nonvictims,
female victims of sexual assault were significantly more likely to report a wide range of
physical symptoms and chronic diseases; for example, victims were nearly 2 times more
likely to report cardiopulmonary symptoms, and 3 times more likely to report pain
symptoms.

In addition, significant associations have been reported between trauma exposure and
a range of detrimental health-risk behaviors, including cigarette smoking (Acierno et al., 2000), drug abuse (Kilpatrick et al., 2000; McCauley et al., 1997), suicide attempts (Felitti et al., 1998), high-risk sexual behaviors (Lang et al., 2003; Springs & Friedrich, 1992) and alcohol abuse (see Stewart, 1996, for a review).

**Why Screen for Traumatic Life Events in Primary Care?**

Advocates of screening for exposure to traumatic life events in primary care patients (e.g., Lecrubier, 2004; Mollica, 2001) cite several central arguments: the high prevalence of trauma survivors found in primary care populations, the patient and health system costs associated with unaddressed trauma sequelae, and the failure of most primary care providers to routinely inquire about trauma history.

*The prevalence of traumatic life events in primary care.* Studies across various samples of primary care patients have found that a substantial proportion of these patients are also trauma survivors: reported prevalence figures range from 57% in a general medical practice (Holman et al., 2000), to 59% among inner-city adolescents (Silva et al., 2000), to 69% in a sample of patients seeking routine care at a women's health clinic (Read et al., 1997; see also Koss, Woodruff, & Koss, 1991; McCauley et al., 1995). Indeed, evidence suggests that symptomatic trauma survivors are more likely to seek treatment from primary care or specialist medical providers than from mental health clinicians (Samson, Bensen, Beck, Price, & Nimmer, 1999; Stein, McQuaid, Pedrelli, Lenox, & McCahill, 2000).

*Cost-benefits of screening for traumatic life events.* Advocates of screening also argue that assessing medical patients for traumatic life events may reduce unnecessary healthcare costs (Holman, Silver & Waitzkin, 2000; Rosenberg et al., 2000; Solomon &
Davidson, 1997). It is well documented that exposure to a traumatic event is related to increased utilization of medical services. For example, a large study of a health maintenance organization found that women members with a physical or sexual assault history made physician visits twice as frequently and had outpatient costs that were 2.5 times greater than those of nonvictims (Holman, Silver, & Waitzkin, 2000; Rosenberg et al., 2000). Medical visits that include referral for mental health intervention, when indicated, may prevent the expenditure of excess time and money associated with misdiagnosis, inappropriate treatment planning, and additional wasted visits and/or tests. Substantial evidence supports the contention that mental health interventions can reduce medical utilization (Cummings & VandenBos, 1981; R. Friedman, Sobel, Myers, Caudill, & Benson, 1995; Sobel, 1995; Zun, Downey & Rosen, 2003).

**Failure to identify trauma survivors in primary care.** Despite the high number of trauma survivors in general medical settings and the costs attendant on failure to address trauma sequelae, symptomatic individuals are likely to go unrecognized in these settings if no formal protocol for identification is in place. Evidence shows that most primary care providers do not routinely ask patients about traumatic life events (Friedman et al., 1992), and most survivors do not readily report such experiences unless asked directly (many patients do not link their symptoms to prior experiences of traumatization; see Kilpatrick et al., 1997; Springs & Friedrich, 1992).

**Why target traumatic life events instead of symptoms?** Because exposure to trauma is associated with a number of diverse risks, screening for traumatic life events may be an efficient way to identify a range of at-risk individuals with a single assessment. This may be particularly advantageous in populations such as college students, for whom a number of
health risks are salient. Screening for trauma exposure may also represent a more effective way to identify important problems that do not fall into formal diagnostic or symptom categories. For example, trauma screening can alert the clinician to an ongoing high-risk situation such as involvement in an abusive relationship. Finally, trauma survivors bear an increased risk of developing problems if exposed to a subsequent trauma (Breslau, Chilcoat, Kessler, & Davis, 1999; Follette, Polusny, Bechtle, & Naugle, 1996). For example, college women who have experienced childhood sexual or physical abuse are more likely to be physically or sexually victimized as adults (Noll, Horowitz, Bonanno, Trickett & Putnam, 2003; F. Nishith, Mechanic & Resick, 2000). Thus, identification of trauma history may in some cases provide an opportunity for early intervention.

Prevalence and Associated Risks of Traumatic Life Events In College Populations

There is good evidence that screening for exposure to traumatic life events may be especially important in college student populations. College represents a critical period of change and adjustment for students, many of whom are living away from home for the first time. College students who have a history of traumatic life events may be particularly vulnerable to the stressors implicit in this period of adjustment.

The prevalence of traumatic life events is high among undergraduates (Bernat, Ronfeldt, Calhoun, & Arias, 1998; Daugherty, 1998); for example, Vrana & Lauterbach (1994) found that 84 percent of a nonclinical population of college students reported exposure to at least one traumatic life event. Some forms of assaultive traumatic life events are particularly common in college women. In a national sample of college women, approximately one-third reported experiencing relationship aggression (White & Koss, 1991). In another sample of 426 students, 43.5 percent of the female students
reported a history of physical or sexual child abuse (Fillingim et al., 1999). In addition, sexual assault, a traumatic life event that carries the highest risk for the development of PTSD (Breslau et al., 1998; Norris, 1992; Resnick et al., 1997; Rosenberg et al., 2000), has its highest frequency among undergraduate females, who are more at risk for sexual assault than women the same age but not in college (Acierno et al., 1997; Fisher et al., 2000). Estimates of the proportion of college women who have been victims of rape or other sexual assault range from 20 percent (Brener, McMahon, Warren, & Douglas, 1999) to 57 percent (Walch & Broadhead, 1992). Of 404 students at the University of Hawaii, site of the present study, 26 percent of the women reported a history of physical abuse and 38 percent reported a history of sexual assault or abuse (Leisen, 1997).

As with the general population, college students who have been exposed to traumatic life events bear a greater risk for the development of psychological, somatic, and behavioral problems. Both the Vrana & Lauterbach and Fillingim, et al. studies found significantly higher levels of depression, anxiety, and PTSD symptomatology among students who reported traumatic life events, compared to those who reported no trauma (see also Marx & Sloan, 2003; McGruder-Johnson, Davidson & Gleaves, 2000). A survey of 965 undergraduates found that those who reported experiencing sexual abuse in childhood were also significantly more likely to have attempted suicide, perpetrated sexual assault, engaged in high-risk sexual activities, and committed juvenile crimes (Duane,

\[2\] Disparities in sexual assault prevalence rates are common, and are attributed to definitional and other methodological variance in the assessment of sexual assault (see Koss, 1993, 1992).
Stewart, & Bridgeland, 1997). Among 707 female undergraduates, a history of sexual abuse (reported by 13%) or physical abuse (reported by 15%) predicted current suicidal risk (Thakkar, Gutierrez, Kuczen, & McCanne, 2000). Also as with older populations, a history of traumatic life events in college students is associated with increased pain complaints and higher rates of health care utilization (Brener et al., 1999; Fillingim et al., 1999).

These studies may actually underestimate the problem. A prospective study by Duncan (2000) assessed undergraduates at the beginning of their freshman year for experiences of childhood abuse, and then examined enrollment records for the subsequent four years. She found that students who reported a history of sexual or physical abuse were more likely to drop out of college compared to their non-traumatized counterparts; the more accompanying symptoms of PTSD that were reported, the earlier a student was likely to drop out. These data suggest that studies of traumatic life events in college students may fail to include a significant portion of the most serious cases.

Methodological Issues in Screening

Screening is a form of assessment used for the purpose of selection—i.e., each individual is either selected or not selected according to some criterion (Anastasi & Urbina, 1997). Screening is most often used as a preliminary, relatively rapid filtering technique, whereby individuals with the highest probability of having a specified characteristic are identified for further evaluation (Derogatis & Lynn, 1999). Thus, screening alone is not intended to diagnose, derive causal inferences, or guide treatment planning, although it can provide a basis for further development of these clinical objectives. The most commonly used mental health screens are those designed to identify particular risk factors, or to
provide a broad summary of the individual's current mental status (Maruish, 2000).

Clinical Utility

The clinical utility of an assessment instrument or procedure refers to the degree to which the obtained data enhance the validity of clinical judgments-- e.g., improve clinical decision-making, contribute to more effective treatment planning and/or lead to better treatment outcomes (Haynes & O'Brien, 2000). Clinical utility is a complex construct that is conditioned upon a number of situation-specific factors, which may include the goals of the assessment, the psychometric properties of the instrument, the characteristics of the targeted variable, the characteristics of the population sample, and the practices and properties of the setting in which the instrument is implemented (e.g., a brief depression screen would have less utility in a setting in which a full diagnostic interview is also administered to all clients than in a setting where no other measures of symptoms are obtained).

To limit the scope of the present study, the evaluation of clinical utility will be confined to consideration of four interrelated factors that have been identified as necessary components of clinically useful screening procedures (Derogatis & Lynn, 2000; Zimmerman & Mattia, 1999). These are specific to the intended population sample, setting, and assessment occasion, and include: 1) the importance or clinical significance of the targeted phenomenon (as defined by base rates and associated risks); 2) the acceptability of the screening procedure to patients; 3) the incremental validity of the screening procedure; 4) the practicality and feasibility of the procedure in the setting.

Acceptability to providers is equally important, but cannot be measured in the present study due to institutional restrictions.
procedure; and 4) the discriminative validity of the screening procedure. The prevalence and risks associated with traumatic life events were discussed above. The following sections review discriminative and incremental validity.

**Discriminative validity.** The discriminative validity of a screening instrument refers to the degree to which measures from the screen can differentiate individuals who possess the targeted attribute from those in whom it is absent (Derogatis & Lynn, 1999; Haynes & O'Brien, 2000). Several interrelated, context-specific factors are important when assessing the discriminative validity of a screening instrument. To be able to accurately identify cases, the instrument should first be reliable, that is, produce results that are consistent over time (temporal stability) and/or across different assessors (interobserver agreement). Discriminative validity of screening is also related to indices of power and sensitivity that indicate the instrument's classification accuracy. These indices are sensitivity, the probability of a positive identification given that the person has the targeted condition; specificity, the probability of a negative test result given that the person does not have the condition; *positive predictive power* (PPP), the probability that a person with positive screening results has the condition; and *negative predictive power* (NPP), the probability that a person with a negative screening result does not have the condition.

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4 A fifth criterion, the effect of screening on patient outcomes, has also been cited as a component of clinical utility (e.g., Anfinson & Bono, 2001), but is beyond the scope of the present study.

5 Because variables may change over time, reliability coefficients must be interpreted relative to the temporal stability of the targeted variable(s) (Haynes & O'Brien, 2000).
Sensitivity and specificity provide important information about the psychometric capabilities of the screening instrument; while PPP and NPP contribute information that is more clinically relevant, since they guide the clinician in interpretation of a given set of screening results (Zimmerman & Mattia, 1999). The base rate of the targeted attribute in the population of interest significantly affects positive and negative predictive power: given constant sensitivity and specificity, PPP will be lowered if the base rate is low, while NPP will be higher if the base rate is low.

There are no definitive standards for evaluating sensitivity, specificity, PPP and NPP of a screen, since the relative meaning and significance of these indices are dictated by the characteristics of the setting, population and target condition, as well as the specific requirements of the screening occasion. In general, when evaluating screening results, the relative costs of failing to identify the patients with the targeted condition versus those of misclassifying patients who do not have the targeted condition must be weighed: those who are “missed” will go without the intervention presumed to be important; while those incorrectly identified will undergo unnecessary assessment. The weight given to each of these will vary depending on the nature of the targeted condition and the costs associated with follow-up. For example, failing to identify a suicidal patient would be more costly than mistakenly subjecting a nonsuicidal patient to further assessment; while failing to identify a mildly depressed patient would be less costly than, and perhaps preferable to, referring a misidentified individual for a lengthy diagnostic follow-up in a clinic that is short of time and personnel.

*Incremental validity.* Incremental validity refers to a measure’s relative predictive efficacy—that is, the measure’s ability to explain or predict a phenomena of interest
relative to other measures (Haynes & Lench, 2003). In the case of screening, incremental validity denotes the degree to which the measure identifies more cases than another screening measure, or more cases than would be routinely identified without screening.

Methodological Issues Specific to Assessment of Traumatic Life Events

Despite compelling reasons to screen medical patients for exposure to trauma, certain methodological issues specific to traumatic life event assessment potentially compromise the clinical usefulness of such screening. These are: 1) the time required for the standard exhaustive trauma history assessment, which is incompatible with healthcare providers' need for rapid assessment; and 2) given the widely-documented underreporting of certain significant traumatic experiences, notably those involving assaultive trauma, a question regarding victims' willingness to report these experiences to a healthcare provider.

Lengthy Versus Brief Approaches to Trauma Assessment

Whether conducted in self-report or interview format, assessment of traumatic life events has traditionally taken one of two broad approaches. The first, briefer approach inquires about traumatic event exposure with one or several broad screening questions. For example, formal diagnostic interviews for PTSD, such as the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Williams & Gibbon, 1997), use a broad, open-ended question to assess Criterion A, exposure to trauma, before evaluating other criteria for the diagnosis of PTSD. The second, more exhaustive approach asks respondents about a range of specific events, usually presented in inventory format. An example of the inventory approach is the Traumatic Life Events Questionnaire (TLEQ; Kubany, Haynes, 2000), which assesses exposure to each of 20 potentially traumatic events.
Most trauma researchers recommend use of an inventory assessment over a screening question approach to detection of trauma history, arguing that brief screening questions are unlikely to be either sufficiently sensitive or reliable (Goodman et al., 1998; Green et al., 1997; Krinsley & Weathers, 1995). However, for several reasons, the longer inventory method is unlikely to be adopted for screening in most general medical settings. First, as a number of researchers attempting to implement mental health screening in such settings have reported, provider and/or staff compliance with the screening is unlikely to be maintained if the method requires more than minimal time or involvement (Maruish, 2000; Schedler et al., 2000; Whooley, Stone, & Soghikian, 2000). Second, it is likely that, as mental health screening methodology evolves, assessment of single risk factors will be replaced by broadband screening across multiple risks, precluding all but the briefest of inquiries about trauma history (Bufka, Crawford & Leavitt, 2002; Maruish, 2000).

A number of investigators seeking to enhance efficiency of screening for problems other than traumatic events have found that briefer measures perform favorably, and are generally better accepted in primary care settings when compared to longer instruments (e.g., Brody et al., 1998; Spitzer, Kroenke, & Williams, 1999). For example, Williams (1998) found that a single screening question for depression performed about the same as a 20-question instrument, and because of its brevity was more feasible in the busy medical clinic setting where it was implemented. Thus, it may be worthwhile to reconsider the relative merits of longer versus shorter methods of traumatic event assessment when rapid screening is the goal.

Despite the widely-held consensus that abbreviated measures do not adequately
assess traumatic event exposure, the evidence on which this opinion rests has been largely derived from comparisons of prevalence rates between studies using different methodologies (e.g., Breslau, Davis, Andreski, & Peterson, 1991; Lee & Young, 2001; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Only two published studies have implemented both inventory and open-ended question assessment strategies within the same sample and then examined within-subject differences in reporting rates (Franklin, Sheeran, & Zimmerman, 2002; Weaver, 1998).

In the first of these, Franklin and colleagues (2002) examined the performance of the single SCID PTSD module screening question (First et al., 1997) in a sample of psychiatric outpatients (N = 839). Their findings support the contention that the abbreviated approach tends to miss some events, but also raise a question about the clinical importance of the events that are missed. While the single SCID screening question failed to identify 23% of the individuals who subsequently reported an event when given the list of events to review, the approach only missed 4% of those patients reporting an event who also reported symptoms of PTSD. The investigators inferred from these findings that a brief screen may be sufficient to capture most clinically significant traumatic experiences (i.e., those that are linked to significant impairment or distress); and suggested that, at least in settings where the goal is to rapidly identify individuals who would benefit from referral, such an approach to trauma history assessment might be an acceptable option.

It should be noted, however, that clinical significance was defined only by symptoms of PTSD in this study; investigators did not measure other symptoms or problems known to be associated with trauma. In addition, they did not examine the
nature of the traumatic events that were disclosed with the brief screen relative to those reported with the list. The briefer method would be less clinically useful if it failed to identify a significant proportion of those high-risk individuals who are victims of assaultive trauma, since, as noted, interpersonal assaults as a class of events pose the highest risk for an adverse outcome (Lee & Young, 2001; Dansky, et al., 1997; Drosserman, et al., 1990; Kessler, 2000), including that of subsequent revictimization (Acierno et al., 1999).

Findings by Weaver (1998), the other investigation that directly compared the open-ended question and inventory methods of traumatic event assessment, suggest that a brief screen might be less sensitive to assaultive events. Weaver asked a small sample of battered women (N = 41) to list all of their life experiences that were: “...frightening or traumatic, like having your life threatened, seeing someone dead or badly hurt, or having your house burn down” (p. 182). She then followed up by inquiring about a range of specific potentially traumatic events, including childhood sexual abuse. Significantly more experiences of childhood sexual abuse (23 events) were reported in response to the list of events than in response to the single question (3 events). There were no significant differences between the methods for eliciting other categories of trauma, and it is possible that the limited set of examples given in the open-ended question discouraged the reporting of childhood sexual trauma. However, Weaver’s findings parallel those of

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6 The question used by Weaver in the study came from an earlier version of the screening question for PTSD in the SCID (Spitzer, Williams, Gibbon, & First, 1992); this question was subsequently revised to include “rape” as an example.
researchers in the area of assaultive trauma, who report that such experiences are particularly likely to be underreported with a brief assessment (Koss & Gidycz, 1985; Kilpatrick et al., 1987).

Disclosure of Sensitive Topics

Another question relevant to the clinical usefulness of trauma screening concerns the willingness of primary care patients to disclose private or sensitive events, such as assaultive traumas. The underreporting of assaultive traumas has been widely discussed (e.g., Davis et al., 2003; Fisher et al., 2000; Resnick et al., 1996); and providers often report they are reluctant to screen patients for exposure to these events because they believe patients would be uncomfortable or unwilling to be candid in reporting (Kilpatrick et al., 1997, D'Avolio, 2001; Sugg & Inui, 1992). However, the accuracy of this perception is unclear. Surveys that have simply asked patients about their willingness to be screened have yielded contradictory information: some researchers report a sizeable proportion of patients who assert they do not wish to discuss their traumatic experiences with their primary care provider (McNutt, Carlson, Gagen, & Winterbauer, 1999; Walch & Broadhead, 1992), while others show that most primary care patients maintain they would welcome such discussion (Friedman et al., 1992; Murdoch & Nichol, 1995).

Other Concerns in Trauma Assessment

Wording of questions. Also argued to influence reporting of traumatic life experiences is the content of the questions used to elicit these experiences (e.g., Acierno et al., 1997, Koss, 1985; Resnick et al., 1996). In particular, it is contended that assaultive trauma is likely to be underreported when assessments define events using loaded or legal terms (e.g., “rape,” “domestic violence” or even “assault”), instead of behaviorally-specific
language—presumably because such words hold varied meaning for different individuals (Wolfe & Kimerling, 1997). For example, community surveys have found that many women do not spontaneously endorse “sexual assault” or “rape” when interviewers use these terms and the event has been perpetrated by someone familiar (Koss, 1993; National Victim Center, 1992). Indeed, the SCID PTSD screening question (First et al., 1997) used in the Franklin et al (2002) study described above has been criticized as less likely to identify assault victims because of its lack of behavioral specification in the wording (Acierno, 2000; Resnick et al., 1996).

Unfortunately, because the brief assessments associated with lower reporting rates have also tended to use the loaded, less behaviorally-specific terms like “rape,” the relative contributions of length and language to assessment sensitivity is unclear. It may be particularly important to examine the relative sensitivity of these methods for screening within a college population because of the high incidence of assaultive trauma in this population (Fisher, et al., 2000).

*DSM-IV stressor Criterion A-2.* As noted above, Criterion A, the definition of a traumatic stressor for the diagnosis of PTSD, was revised in DSM-IV (American Psychiatric Association, 2000) to include a subjective component, Criterion A2, which requires that the person’s response to the stressor event must have involved “intense fear, helplessness, or horror.” The criterion was generated by the DSM-IV work group, who extrapolated the three subjective phenomena from a factor analysis of a number of emotional and physiological responses reported retrospectively by PTSD-diagnosed participants in the field trial sample (Kilpatrick et al., 1998). Two subsequent studies, one retrospective (Roemer, Orsillo, Borkovec, & Litz, 1998), and one prospective
(Brewin, Andrews, & Rose, 2000) found that participants' reports of one or more of these subjective responses concurrent with the traumatic stressor predicted a diagnosis of PTSD. Breslau and Kessler (2001) interviewed a large community sample (N = 2181) for exposure to traumatic life events and PTSD, and reported that less than 1% of those who did not endorse A2 met the remaining criteria for the diagnosis of PTSD. These data suggest that adding an inquiry about these subjective responses to a traumatic stressor may improve the predictive power of the screening assessment.

Goals

The purpose of this investigation was to evaluate the clinical utility of utilizing a single question to screen for traumatic life events within a sample of female university healthcare clinic patients. Two versions of the screening question across two instructional sets were assessed to determine each condition's relative classification accuracy for identifying respondents who report experiences of sexual or physical assault, and/or symptoms of PTSD. In addition, the incremental classification accuracy of the DSM-IV criterion A2 was examined. Discriminative and incremental validity of obtained measures, the acceptability of the screening procedure to the participants, and the clinical significance of obtained measures were assessed.

Specific goals of the study were:

1. To examine the degree to which a single SCID screening question measure of traumatic life events correlates with traumatic life events as self-reported on a validated list-of-events method of assessment, the 22-item Traumatic Life Events Questionnaire (TLEQ; (Kubany, Haynes et al., 2000)

2. To examine the classification efficiency of a single SCID screening question
measure of traumatic life events in predicting physical assault, sexual assault, and non-assaultive traumatic life events, as self-reported on the TLEQ; and symptoms of PTSD, as self-reported on the Distressing Events Questionnaire (DEQ; Kubany, Leisen, Kaplan, & Kelly, 2000).

3. To examine the incremental predictive efficacy (for “1,” and “2” above) associated with a modification of the single SCID screening question to include behaviorally-worded examples of physical and sexual assault.

4. To examine the relative predictive efficacy of informing respondents that their responses will or will not be provided to health center personnel.

Methods

Participants

Participants were recruited from female students 18 years old and older who presented to the University of Hawaii student health clinic for medical care. Two female researchers (a research assistant, and the investigator or an advanced postgraduate assistant) were stationed in the health clinic waiting room. Incoming patients were approached by one of the researchers and asked to participate in the study after they had registered at the clinic intake desk. Patients who appeared to be in need of urgent medical care were not approached. No incentives were offered for participation in the study.

During the 3-week period of data collection, a total of 453 patients were approached and asked to take part in the study. Of the 388 who agreed to participate, 49 had to be excluded from the analysis because of missing data. The final sample of 339 participants were from various ethnic groups, which included Caucasian (41.2%),
Japanese (19.6%), Filipino (6.8%), Hawaiian/Pacific Islanders (8.9%), Chinese (6.2%), other Asian (7.4%), Hispanic (4.7%), and other or mixed ethnicity (5.0%). Their ages ranged from 18 to 52, with a mean age of 22.9 years (SD = 5.7). Demographic characteristics of participants are presented in Table 1.

**Procedures**

All data collection procedures were conducted in the waiting room of the University Health Services clinic. When female patients had registered for their visit, researchers provided them with a brief project description (Appendix A) describing the general nature of the project and requirements for participation; and an informed consent form (Appendix B) describing the nature of patients' participation in greater detail. Eligible patients who agreed to participate were given the screening packet to complete while awaiting their visit with a health provider.

Participants were assigned consecutively to one of four conditions. Each condition combined one of two versions of the single screening question with one of two instructional sets (Appendix C). The two questions (described further below) are: 1) the unmodified two-part screening question derived from the SCID PTSD module (First, et al., 1997); and 2) a revised version of the SCID screening question with behaviorally-worded examples of sexual and physical assault. Each version of the screening question was prefaced by one of two instructional sets: 1) “Your response to the item below may be given to your provider to aid in your health care here today;” or 2) “Your response to the item below is strictly confidential and anonymous. It will not be shown to your
Table 1

*Descriptive Characteristics of Participants*

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Table 1 (cont.)

Descriptive Characteristics of Participants

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<td>Filipino</td>
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<tr>
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<td>Other&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5.0</td>
<td>17</td>
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</table>

<sup>a</sup> Includes individuals reporting any of the following primary ethnicities: Korean, Southeast Asian, Taiwanese.

<sup>b</sup> Includes individuals reporting any of the following primary ethnicities: African American, Native American, or “mixed.”

<sup>c</sup> Includes individuals reporting any of the following languages: Ilocano, Vietnamese, Chamorro, or “other.”
provider or any health clinic staff.”

Each screening packet contained a participant information form (Appendix D), one of the four versions of the screening question/instructions, the TLEQ (Kubany, Haynes et al., 2000; Appendix E); a measure of PTSD symptoms, the Distressing Events Questionnaire (DEQ; Kubany, Leisen et al., 2000; Appendix F); and a short feedback form (Appendix G). The research assistant remained available to answer questions, time the length of the screening session, and record any problems that arise during the session on a Screening Log (Appendix H).

**Debriefing**

Upon their completion of the screening packet, participants were given a debriefing packet that contained two handouts. The first handout, “Exposure to Traumatic Events” consisted of psychoeducational material about exposure to traumatic events and related problems, a resource list of emergency contact numbers, community referrals, and a bibliography of self-help material (Appendix I). The second handout, “The Purpose of this Study” explained the goals of the research (Appendix J).

**Training and Monitoring of Research Assistants**

Prior to initiation of the study, five female research assistants were trained by the principal investigator to conduct the screening using a standardized protocol (Appendix K). Assistants were trained in (a) recruitment procedures, (b) how to obtain informed consent, and (c) how to document the screening process. They were also trained in how to use the screening instrument and how to interpret the results. The research assistant remained available to answer questions, time the length of the screening session, and record any problems that arise during the session on a Screening Log (Appendix H).

7 With the exception of the screening question, all measures were prefaced with a statement that informed the participant “Your responses on this questionnaire are entirely confidential and anonymous and will not be shared with your provider.”
Clinical Utility of a Brief Screening Question

consent, (c) how to conduct the screening session, and (e) how to conduct the debriefing session. Training consisted of discussion, demonstrations and role plays. In order to be allowed to collect data, each assistant was required to successfully demonstrate competency with the protocol in a mock data collection session. To insure adherence to procedures, research assistants were monitored on site by either the investigator (SW) or an advanced team member (DY).

Measures

Demographic Information

Participant demographic information was obtained on a participant information form (Appendix D) administered with the questionnaire packet. The following data was collected: gender, age, marital status, year in college, and ethnicity.

Traumatic Life Events

Participants' exposure to traumatic life events was assessed with one of four versions of the screening question from the PTSD module of the Structured Clinical Interview for DSM-IV (SCID; First, et al., 1997; Appendix C); and with the Traumatic Life Events Questionnaire (TLEQ, Kubany et al., 2000; Appendix E). Measures from the SCID were used to classify participants as trauma-positive or negative. Measures from the TLEQ were used to assess the relative ability of each of the screening approaches to detect a) traumatic events, and b) sexual and physical assault; and to survey the number and nature of traumatic events reported by this population.

Screening questions. The screening questions were derived from the SCID-PTSD module (First et al., 1997), a structured diagnostic interview that assesses the presence of each of the DSM-IV diagnostic criteria for PTSD. The screening question prefaces the
SCID interview by assessing exposure to a traumatic event; if the respondent reports one or more such events, the clinician then proceeds to inquire about PTSD symptom clusters.

Across a number of studies (e.g., Blake et al, 1995; Foa, Riggs, Dancu & Rothbaum, 1993; Schnurr, Friedman & Rosenberg, 1993), measures from the SCID-PTSD module have demonstrated acceptable to good interrater reliability for both lifetime and current diagnoses in the sample; as well as acceptable convergent validity when compared to other measures of PTSD (Schnurr, et al., 1993). However, few data are available on the psychometric capabilities of the screening question itself, since most studies that have evaluated the SCID PTSD module were conducted with populations whose traumatic event had been identified prior to PTSD assessment (i.e., combat veterans). One exception is the study by Franklin et al. (2002), discussed above, which found that, compared to an inventory assessment of traumatic events, the SCID-PTSD module screening question performed about equally well in ability to identify symptomatic trauma survivors in a sample of psychiatric outpatients. For identifying individuals in this sample with a trauma history, the screening question’s sensitivity was 84%; for identifying trauma survivors who also reported symptoms of PTSD, sensitivity of the screening question was 94%, specificity was 62%, PPP was 51% and NPP was 96%. The interrater reliability kappa coefficient for the presence of Criterion A1 was .96.

Two versions of the unmodified SCID-PTSD module screening question are compared in the present study. Question 1, the unmodified version, assesses DSM-IV PTSD Criterion A with the following inquiry: “Sometimes things happen to people that are extremely upsetting-- things such as being in a life-threatening situation such as a
major disaster, very serious accident or fire; being physically assaulted or raped, seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?” Unlike the structured interview, which asks respondents who respond affirmatively to describe the nature of the event(s), the question was presented as a forced-choice (“yes” or “no”) option only.

Question 2 is also a forced-choice (“yes” or “no”) inquiry that consists of a revised, behaviorally-worded version of the original SCID screening question. The revised language replaces the original wording “being physically assaulted or raped,” with behaviorally-worded descriptions of sexual and physical assault (modified language in italics): “Sometimes things happen to people that are extremely upsetting-- things such as being in a life-threatening situation such as a major disaster, serious accident or fire; being hit, kicked, punched, or otherwise physically hurt by someone; being forced or verbally coerced into any kind of sexual activity that you did not want; seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?”

The revised wording of the physical assault example was derived from an item on the Partner Violence Screen (Feldhaus et al., 1997), a 3-question screening instrument intended to identify victims of partner violence. The original question (“Have you been hit, kicked, punched or otherwise physically hurt by someone within the past year? If so, by whom?”) has been included in a number of interpersonal screening instruments (e.g., Hillard, 1985; McFarlane, Parker, Soeken, & Bullock, 1992; Norton et al., 1995). In a
sample of female emergency department patients (Feldhaus et al., 1997) the PVS detected 71.4% of victims of partner violence detected by the Conflict Tactics Scale (CSA; Straus, 1979), and 64.5% of victims identified by the Index of Spouse Abuse (ISA; Hudson & McIntosh, 1981); however, the single question detected nearly as many cases as did the full 3-question screen, and demonstrated better specificity than the full screen. For identifying physical abuse victims among women outpatients at a veteran’s medical center, a slightly different version of the question\(^8\) demonstrated a sensitivity of .90 and specificity of .94 when compared to a structured clinician interview (McIntyre et al., 1999).

The sexual-assault example reflects wording recommended by Resnick et al. (1991) as a preferred alternative to the terms “sexual assault” or “rape.” Similar language has been used in a number of instruments that assess traumatic events (e.g., McIntyre et al., 1999; Read et al., 1997; Vrana & Lauterbach, 1994) and is thought to be associated with higher reporting rates than sex assault inquiries that use less behaviorally-specific language (Resnick et al., 1996). For identifying sexual abuse victims among women outpatients at a veteran’s medical center, an item incorporating similar wording\(^9\) had a

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\(^8\) The question, an item on the Trauma Questionnaire (TQ; McIntyre et al., 1999), reads “At any time, has a spouse or partner (significant other) ever hit you, kicked you, or physically hurt you in some way?”

\(^9\) The item is also on the Trauma Questionnaire (TQ; McIntyre et al., 1999) and reads: “Has anyone ever used force or the threat of force to have sex with you against your will?”
sensitivity of .89 and a specificity of .90 when judged against a structured interview (McIntyre et al., 1999).

Both the unmodified and the behaviorally-revised versions of the SCID screening question are presented as 2-part items: the question inquiring about exposure to trauma (Criterion A1); and a follow-up question (Criterion A2): “(If you answered yes): When the event or events happened, were you very afraid, or did you feel horrified or helpless?” For either version, a participant was deemed to have screened positive for a traumatic life event if she answered “yes” to both parts, A1 and A2.

*Traumatic Life Events Questionnaire (TLEQ).* The TLEQ assesses exposure to a range of 20 potentially traumatic events, including physical assault, child sexual abuse, witnessing family violence, and serious accidents resulting in injury to self or others or in the death of a loved one. Events are described in behavioral terms. Items for the TLEQ were generated from examination of existing instruments that assess exposure to traumatic events, reviews of the traumatic stress literature, and open-ended responses on an “other trauma” item from more than 1,000 completed versions of an earlier version of the TLEQ. As the final phase of content validation for the TLEQ, seven published experts in the area of PTSD evaluated the relevance and representativeness of the individual items and item pool, and additional revisions were made based on the reviewers’ suggestions.

The TLEQ has demonstrated adequate to excellent temporal stability in separate studies with various populations, including Vietnam veterans, battered women, residents of a substance abuse program, and college students (Kubany, Haynes, et al., 2000). For example, in the study of 62 college students, test-retest agreements for all items ranged
from 77% to 100%, and averaged 88%. In the same sample, responses on the TLEQ showed adequate convergent validity when compared to responses to a structured interview: Kappa coefficients were above .40 for 13 of 16 items and above .60 for 5 items. The overall mean percentage of questionnaire and interview agreements (with a 1-week delay between questionnaire and interview administrations) ranged from 74% to 97% and averaged 85% (Kubany, Haynes et al., 2000).

The TLEQ asks respondents to indicate whether or not they have experienced an event. If an event is endorsed, respondents are asked if they experienced intense fear, helplessness or horror during the event. An open-ended question at the end asks if the respondent has experienced any other traumatic events that are not included, and the respondent may write in a description of the event. Finally, respondents are asked to indicate the event that causes them "the most distress" (if any). If an event is selected, that event is used as the basis for the subsequent set of questions about PTSD symptoms, contained in the DEQ (Kubany, Leisen, et al., 2000; described below).

**Physical assault.** In the present study, occurrences of physical assault were defined on the basis of responses to 3 questions on the TLEQ, questions 9, 13 and 14, that inquire about childhood physical abuse and interpersonal assault. A participant was deemed to

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10 The questions are: 9) Have you ever been hit or beaten up and badly hurt by a stranger or by someone you didn’t know very well; 13) While growing up: Were you physically punished in a way that resulted in bruises, burns, cuts, or broken bones; and 14) Have you ever been slapped, punched, kicked, beaten up, otherwise physically hurt by your spouse (or former spouse), a boyfriend/girlfriend, or some other intimate partner.
have reported a physical assault if at least one of these items, including the “fear, helplessness or horror” criterion, was endorsed.

**Sexual assault.** Occurrences of sexual assault were defined on the basis of responses to 4 questions on the TLEQ, questions 15 through 18, that inquire about a

about childhood physical abuse and interpersonal assault. A participant was deemed to have reported a physical assault if at least one of these items, including the “fear, helplessness or horror” criterion, was endorsed.

**Symptoms of Post-Traumatic Stress Disorder**

Symptoms of post-traumatic stress disorder were assessed with the Distressing Event Questionnaire (DEQ, Kubany, et al., 2000; Appendix F). The DEQ assesses PTSD according to the diagnostic criteria provided in DSM-IV (APA, 1994). In samples of Vietnam combat veterans and battered women, the DEQ demonstrated high internal consistency (alpha coefficients for the full scale ranged from .93 to .98) and satisfactory temporal stability. In four separate samples of women with histories of physical and/or sexual abuse, the DEQ exhibited satisfactory convergent validity when judged against the

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11 The questions are:  9) Have you ever been hit or beaten up and badly hurt by a stranger or by someone you didn’t know very well;  13) While growing up: Were you physically punished in a way that resulted in bruises, burns, cuts, or broken bones; and  14) Have you ever been slapped, punched, kicked, beaten up, otherwise physically hurt by your spouse (or former spouse), a boyfriend/girlfriend, or some other intimate partner. If a question is endorsed, the respondent is then asked: “Did you experience intense fear, helplessness, or horror when it happened?”
Clinician Administered PTSD Scale (CAPS; Blake et al., 1990), a widely-validated structured interview assessment of PTSD. Using a total symptom score cutoff method, the DEQ correctly classified the PTSD status of 90% of 255 women; using a DSM-IV symptom criteria method of diagnosis (and a symptom score cutoff of 1), diagnostic efficiency was 88% for all women.

The DEQ was also found to be highly correlated with other measures of PTSD in these studies. For example, using DSM-IV symptom criteria for assigning PTSD status, the DEQ was correlated between .86 and .91 with the Modified PTSD Symptom Scale (Falsetti, Resnick, Resick & Kilpatrick, 1993) in three of the four samples of women.

In the screening packet, the DEQ immediately followed the presentation of the TLEQ. As noted, participants are asked at the end of the TLEQ administration to select one event, if any, that causes them the "most distress." The DEQ opens with the introduction "The purpose of this questionnaire is to evaluate your reactions to the event (or series of events) experienced by you and noted on the previous page as causing you the most distress." If an event is endorsed, that event is then framed as the focus of the following inquiry about possible PTSD symptoms. There are 20 items on the DEQ that inquire about key symptoms of PTSD (5 reexperiencing symptom items, 7 numbing/avoidance symptom items, 5 hyperarousal symptom items, and 3 items that ask about guilt, anger and grief). Respondents are instructed to indicate the degree to which they experienced each of the symptoms in the past 30 days, and are given five response options to each symptom question—from "0 = Absent or did not occur" to "4 = Present to an extreme or severe degree."

As described below, PTSD "symptoms" in the current study were defined
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according to DSM-IV symptom criteria (Criteria B, C, and D). A symptom score of 2
("present to a moderate degree") or higher was used to denote symptom presence, based
on Kubany and colleagues' (2000) finding that using this symptom score cutoff produced
a correlation of .80 and .81 for Criterion B, C, and D items on the DEQ with the
corresponding criterion items of the CAPS (all p's <.05), across all the four groups of
female trauma survivors.

Acceptability of the Screening Procedure

Acceptability of the screening procedure was assessed on the basis of evaluative
ratings provided by the participants, and on the basis of observational data collected by
research assistants regarding the physical administration of the screening packet.

Feedback Form. Patient evaluations of acceptability of the screening procedure
were solicited on the Feedback Form (Appendix G) administered as the final item in the
screening packet. The Feedback Form asks participants to evaluate comfort with and
emotional reactions to the material, and perceived usefulness. Many of the questions on
the Feedback Form were developed and used in a previous study utilizing a similar
protocol (Richards, 1999).

Screening Log. For each participant, research assistants monitored the screening
session and recorded on the Screening Log (Appendix H) the amount of time required by
the participant to complete a) the SCID screening question and b) the TLEQ; and also the
number of questions or requests for assistance, interruptions, and any participant distress
or other reactions.

Research assistants were also instructed to note on Screening Logs all occasions in
which participants were observed to a) flip back through the questionnaire packet and/or
review their answers on prior forms; b) change or cross out answers on prior forms; c) answer the questionnaires out of the presented order; or d) move out of the view of the researcher while filling out the questionnaires so that they could no longer be monitored.

**Manipulation Checks**

The screening questions used in this study assess only the presence, and not the nature of specific traumatic events. To evaluate the extent to which events reported on the TLEQ were also referent events on the SCID, participants were administered a follow-up question (presented as “strictly anonymous and confidential; for research purposes only;” see Appendix L) immediately after they completed the screen: “If you answered yes to the previous question, please describe very briefly the kind of event or events you experienced.”

To evaluate the success of the Will-Report versus Won’t-Report instructional sets, two questions that asked participants whether or not their responses would be given to their providers were added to the Feedback Form, which was given as the last form to be completed: “The one-page pink form [referring to the SCID screen] that I just completed (circle one:) will / will not be given to my provider here at the health service;” and, “The two-page blue form [referring to the TLEQ] that I just completed (circle one:) will / will not be given to my provider here at the health service.”

**Data Reduction and Statistical Analyses**

**Data Reduction**

*Missing data.* Participants who did not complete both the SCID screen and the TLEQ were eliminated from analyses; the final sample of 339 women completed at least these measures. Because participants were sometimes called in for their appointment
before completing all of the packet, only a subset of the full sample was used for analyses that included DEQ \((n = 281)\) or Feedback Form \((n = 285)\) data. Individual missing items on questionnaires were coded as such and not included in analyses.

**Classification of Trauma Survivors.** The TLEQ served as criterion for classifying participants as trauma survivors. Traumatic life events on the TLEQ were defined as any event endorsed by a participant that were also endorsed as meeting Stressor Criterion A2, fear, helplessness and/or horror. A participant was classified as a survivor of assaultive trauma if she reported at least one assaultive event on the TLEQ for which Criterion A2 was also endorsed. A participant was classified as a survivor of nonassaultive trauma positive if she: a) reported at least one nonassaultive event on the TLEQ for which Criterion A2, fear, helplessness and horror, was also endorsed; and b) was not classified as a survivor of assaultive trauma.

Occurrences of physical assault were assessed by counting the number of participants who endorsed TLEQ items 9, 13 and/or 14. A participant was classified as a survivor of physical assault if she endorsed any of these items and also endorsed criterion A2 for that item. Occurrences of sexual assault were assessed by counting the number of participants who endorsed any of TLEQ items 15-18. A participant was classified as survivor of sexual assault if she endorsed any of these items and also endorsed criterion A2 for that item.

**Screening results.** SCID screening question responses were counted as positive if the participant endorsed both Question 1 (Criterion A1) and Question 2 (Criterion A2). The number of trauma-positive cases were counted for each of the four experimental conditions.
The events reported on follow-up question to the SCID screen were classified according to the TLEQ items. Two research assistants (E.G. & D.Y.) were trained to code participants’ narrative responses on the follow-up question, using TLEQ items as the standard for classification. Specific aspects of training included review and discussion of coding procedures, review and discussion of traumatic event categories defined by the TLEQ, and two 1½ hour practice sessions in which a number of hypothetical responses were presented and coded by the research assistants, and their coding decisions then discussed. The two research assistants and the principal investigator then each independently coded all participant responses on the SCID follow-up question \( (n = 242) \). Ratings made by each of the research assistants were compared to those done by the principal investigator. The kappa coefficients for each pair of coders were .88 and .83, respectively.

**Traumatic Life Events.** Means and standard deviations for total number of traumatic life events reported on the Traumatic Life Events Questionnaire (TLEQ) were computed for each condition, as were frequencies of event categories. Total number of traumatic life events endorsed were calculated for each participant.

**Symptoms of PTSD.** Mean and standard deviations for total symptom scores on the Distressing Events Questionnaire (DEQ) were calculated for all groups. Both total symptom score and number of symptoms reported were calculated for each participant. Symptoms were counted as those item clusters that meet DSM-IV symptom criteria B, C, or D, using a symptom score of 2 or higher.

**Statistical Analyses**

Descriptive statistics of the samples within each condition were calculated.
Frequencies and percentages were computed across all groups for demographic variables: education level, ethnicity, and year in school; for traumatic life events by number and categories of events, and for PTSD symptoms and for total symptom score.

To test for success of random assignment, demographic characteristics of participants in all conditions were compared using chi square tests for dichotomous and categorical variables and one-way ANOVA for continuous variables.

Kappa coefficients were used to compute rates of classification agreement between the TLEQ and each version of the SCID screen for 1) assaultive traumas, 2) nonassaultive traumas, and 3) 2 or more symptoms of PTSD on the DEQ.

Evaluation of the discriminative validity of the SCID screening measures relative to the TLEQ, sensitivity, specificity, positive predictive power and negative predictive power were calculated for each of the conditions by determining the proportions of individuals who responded positively and negatively to the SCID screening question relative to the proportions who a) did and did not report any trauma on the TLEQ, b) did and did not report an occurrence of assaultive trauma on the TLEQ; c) did and did not meet symptom criteria for PTSD on the DEQ; and d) did and did not exceed the total symptom score cutoff of 26 on the DEQ.

Results

Rates of Traumatic Events

TLEQ results. Table 2 presents percentages, frequencies and types of all events, traumatic events, and “most distressing” events reported on the TLEQ. Of participants who reported experiencing any event on the TLEQ (94.4%, n = 320), 84.9% (n = 276) also reported experiencing fear, helplessness and/or horror. The single event that was
Table 2

Frequencies and Percentages of Participants Reporting Specific Events on the TLEQ

<table>
<thead>
<tr>
<th>Type of Event</th>
<th>Reported Event</th>
<th>Reported Event and Fear, Helplessness/ Horror</th>
<th>Endorsed as “Most Distressing Event”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%a</td>
<td>b n</td>
<td>%a</td>
</tr>
<tr>
<td>Any Event</td>
<td>94.4</td>
<td>320/ 339</td>
<td>84.9</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>58.5</td>
<td>197/ 337</td>
<td>23.1</td>
</tr>
<tr>
<td>Motor vehicle accident</td>
<td>17.2</td>
<td>58/ 338</td>
<td>12.7</td>
</tr>
<tr>
<td>Other accident</td>
<td>12.2</td>
<td>41/ 337</td>
<td>9.8</td>
</tr>
<tr>
<td>Lived in war zone</td>
<td>2.1</td>
<td>7/ 338</td>
<td>0.9</td>
</tr>
<tr>
<td>Sudden death of loved one</td>
<td>49.6</td>
<td>167/ 337</td>
<td>35.2</td>
</tr>
<tr>
<td>Life-threat to loved one</td>
<td>41.1</td>
<td>139/ 338</td>
<td>28.8</td>
</tr>
<tr>
<td>Life-threatening illness</td>
<td>7.1</td>
<td>24/ 338</td>
<td>4.2</td>
</tr>
<tr>
<td>Robbery with weapon</td>
<td>6.5</td>
<td>22/ 337</td>
<td>5.1</td>
</tr>
<tr>
<td>Witnessed assault to stranger</td>
<td>17.5</td>
<td>59/ 337</td>
<td>14.2</td>
</tr>
<tr>
<td>Threatened with harm</td>
<td>17.5</td>
<td>59/ 337</td>
<td>12.9</td>
</tr>
</tbody>
</table>
Table 2 (cont.)

Frequencies and Percentages of Participants Reporting Specific Events on the TLEQ

<table>
<thead>
<tr>
<th>Type of Event</th>
<th>Reported Event</th>
<th>Reported Event and Fear, Helplessness/ Horror</th>
<th>Endorsed as “Most Distressing Event”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%a</td>
<td>n</td>
<td>%a</td>
</tr>
<tr>
<td>stalked</td>
<td>26.8</td>
<td>90/ 336</td>
<td>21.3</td>
</tr>
<tr>
<td>miscarriage</td>
<td>5.6</td>
<td>19/ 337</td>
<td>3.0</td>
</tr>
<tr>
<td>abortion</td>
<td>11.0</td>
<td>37/ 337</td>
<td>6.0</td>
</tr>
<tr>
<td>other</td>
<td>15.1</td>
<td>50/ 331</td>
<td>11.5</td>
</tr>
</tbody>
</table>

"None most distressing" 10.6 33

Note: TLEQ = Traumatic Life Events Questionnaire.

%a Percent of total number of participants who responded to this TLEQ item. b The number of respondents to each item varied as a function of missing responses.
endorsed most frequently was sudden death of a loved one, reported by 35.2% \( (n = 115) \) of the participants, followed by life-threat to loved one (28.8%; \( n = 96 \)) and natural disaster (23.1%; \( n = 77 \)). Assaultive events were reported by 46.3% of participants \( (n = 152) \); 40.9% \( (n = 134) \) reported an experience of assault that engendered fear, helplessness or horror. At least one sexual assault that included fear, helplessness and horror (including both child and adult experiences of sexual assault) was reported by 29.1% \( (n = 95) \) of the women, and at least one physical assault with fear, helplessness and horror (including assault by stranger, by intimate partner, and/or childhood physical abuse) was reported by 20.8% \( (n = 69) \). Fifty participants (14.9%) reported experiences of both sexual and physical assault.

The event that was most frequently endorsed as causing the “most distress” was sudden death of a loved one, reported by 19.0% \( (n = 59) \) of participants who responded to this item. This was followed by unwanted sexual contact before the age of 13, reported by 8.5% \( (n = 23) \). Assaultive events were reported as “most distressing” by 26.0% of the participants \( (n = 81) \).

A frequency distribution of the number of trauma categories reported on the TLEQ is presented in Table 3. The number of traumatic events (i.e., events associated with fear, helplessness and horror) reported by participants varied from 0 to 13 \( (M = 2.9, SD = 2.6) \). One traumatic event was the modal number, reported by 19.5% \( (n = 66) \) of participants, although 25.7% \( (n = 87) \) reported 5 or more events.

**SCID screen results.** Table 4 presents percentages, frequencies and types of all traumatic events (i.e., events for which fear, helplessness or horror were also endorsed) reported on the SCID screen follow-up question, which asked participants to describe the
Table 3

Distribution of Number of Traumatic Events Endorsed on TLEQ (N = 320)^a

<table>
<thead>
<tr>
<th>Number of Trauma Events</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>18.0^b</td>
</tr>
<tr>
<td>1</td>
<td>19.5</td>
</tr>
<tr>
<td>2</td>
<td>18.3</td>
</tr>
<tr>
<td>3</td>
<td>8.6</td>
</tr>
<tr>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>5</td>
<td>9.4</td>
</tr>
<tr>
<td>6</td>
<td>4.7</td>
</tr>
<tr>
<td>7</td>
<td>5.3</td>
</tr>
<tr>
<td>8</td>
<td>2.9</td>
</tr>
<tr>
<td>9</td>
<td>1.2</td>
</tr>
<tr>
<td>10</td>
<td>0.9</td>
</tr>
<tr>
<td>11</td>
<td>0.3</td>
</tr>
<tr>
<td>12</td>
<td>0.3</td>
</tr>
<tr>
<td>13</td>
<td>0.6</td>
</tr>
</tbody>
</table>

(Mean/SD) (2.9/2.6)

Note: TLEQ = Traumatic Life Events Questionnaire

^a A "traumatic event" was defined as any reported event for which Criterion A2, fear, helplessness or horror, was also endorsed. ^b Either no event was reported, or Criterion A2 was not endorsed for a reported event.
Table 4

*Frequencies and Percentages of Traumatic Events Reported on the SCID Screen "Follow-up," in Order of Frequency*

<table>
<thead>
<tr>
<th>Type of Event</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any assaultive event</td>
<td>28.1</td>
<td>68</td>
</tr>
<tr>
<td><em>Any sexually-assaultive event</em></td>
<td>20.2</td>
<td>49</td>
</tr>
<tr>
<td><em>Any physically-assaultive event</em></td>
<td>8.0</td>
<td>19</td>
</tr>
<tr>
<td>Sudden death of loved one</td>
<td>24.0</td>
<td>58</td>
</tr>
<tr>
<td>Life-threat to loved one</td>
<td>16.9</td>
<td>41</td>
</tr>
<tr>
<td>Other</td>
<td>13.6</td>
<td>33</td>
</tr>
<tr>
<td>Motor vehicle accident</td>
<td>5.8</td>
<td>14</td>
</tr>
<tr>
<td>Other accident</td>
<td>4.1</td>
<td>10</td>
</tr>
<tr>
<td>Witnessed family violence</td>
<td>2.5</td>
<td>6</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>1.2</td>
<td>3</td>
</tr>
<tr>
<td>Robbery with weapon</td>
<td>1.2</td>
<td>3</td>
</tr>
<tr>
<td>Witnessed assault by stranger</td>
<td>1.2</td>
<td>3</td>
</tr>
<tr>
<td>Abortion</td>
<td>0.8</td>
<td>2</td>
</tr>
<tr>
<td>Threatened with harm</td>
<td>0.4</td>
<td>1</td>
</tr>
</tbody>
</table>

*Note:*  
A "traumatic event" was defined as any reported event for which Criterion A2, fear, helplessness or horror, was also endorsed.  
Percent of total events listed; some participants listed more than one event.  
Number of events reported; total number of events reported = 242; total number of participants who reported a traumatic event on the SCID screen follow-up question = 170.
nature of the event or events, if any, referred to on the SCID screen. Of participants who reported experiencing any traumatic event on the SCID screen (55.6%, \( n = 188 \)), 50.7% (\( n = 170 \)) also reported experiencing fear, helplessness and/or horror. Participants in the latter group reported a total of 242 events. One hundred and sixty-four women reported at least one event, 50 reported 2 traumatic events, 23 reported 3 traumas, and 8 reported 4 events on the narrative SCID screen follow-up question. The event that was reported most frequently was sudden death of a loved one, 24.0% (\( n = 58 \)) of all trauma events reported, followed by life-threat to loved one (16.9%; \( n = 41 \)) and "Other" event\(^{12}\) (13.6%; \( n = 33 \)). Assaultive events made up 28.1% of events reported.

**Symptoms of PTSD**

Symptoms of PTSD in participants were assessed by examining their responses to the Distressing Event Questionnaire (DEQ; Kubany et al., 2000). The DEQ was completed by 285 participants. Of this group, 30.0% (\( n = 86 \)) met at least two symptom requirements for PTSD; 15.1% (\( n = 43 \)) met or exceeded the DEQ cutoff of 26 for PTSD established by Kubany, et al. (2000); and 12.2% (\( n = 35 \)) met full symptom criteria for PTSD on the DEQ.

Among participants who reported 2 or more symptoms of PTSD on the DEQ, 64.0% (\( n = 55 \)) reported at least one assaultive trauma; and 32.6% (\( n = 28 \)) reported no

\(^{12}\) Examples of events classified as "Other" either fell outside events defined by the TLEQ, e.g., "Grandmother harassed by peeping-tom," "Saw mother arrested," "Parents in custody battle;" or did not provide enough information to permit classification, e.g.: "Suicide," "Bad things from family."
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assaultive trauma, but at least one nonassaultive trauma. Examination of symptom by trauma category, as reported on the TLEQ, is presented in Table 5. Of those participants who reported no traumatic events on the TLEQ (i.e., either no event was reported, or Criterion A2 was not endorsed for a reported event; \( n = 43 \)), 93.0\% (\( n = 40 \)) reported 1 or fewer symptoms of PTSD on the DEQ; 7\% (\( n = 3 \)) reported 2 symptoms, and none reported more than 2 symptoms. Of those participants reporting no assaultive trauma and at least one nonassaultive trauma on the TLEQ (\( n = 124 \)), 81.5\% (\( n = 101 \)) reported 1 or fewer symptoms of PTSD, 15.3\% (\( n = 19 \)) reported 2 symptoms, 4\% (\( n = 5 \)) exceeded the DEQ cutoff, and 3.2\% (\( n = 4 \)) met criteria for PTSD. Finally, of participants who completed the DEQ and reported one or more assaultive events on the TLEQ (\( n = 113 \)), 51.3\% (\( n = 58 \)) reported 1 or fewer symptoms of PTSD, 21.2\% (\( n = 24 \)) reported 2 symptoms, 33.9\% (\( n = 38 \)) exceeded the DEQ cutoff score of 26, and 27.4\% (\( n = 31 \)) met criteria for PTSD.

**Association of Wording and Instructions to Response Rates**

Chi-square and one-way ANOVA analyses revealed no significant demographic differences among the four wording by instruction conditions. Chi-square analyses were conducted to examine disclosure rates across the four versions of the SCID, using TLEQ responses as the criterion. No significant differences in disclosure rates across the four experimental conditions were found among survivors of nonassaultive trauma, among survivors of assaultive trauma, or among participants who reported two or more symptoms of PTSD on the DEQ.

The four instruction by wording conditions were then collapsed and analyzed separately, first by wording, and then by instruction set.
Table 5

Frequencies and Percentages of Nonassaultive and Assaultive Traumatic Events<sup>a</sup> Reported on the TLEQ by Number of Symptoms of PTSD Reported on the DEQ

<table>
<thead>
<tr>
<th>Traumatic Events Reported on TLEQ</th>
<th>None&lt;sup&gt;b&lt;/sup&gt; (n = 43)&lt;sup&gt;d&lt;/sup&gt;</th>
<th>≥ 1 Nonassaultive Trauma&lt;sup&gt;e&lt;/sup&gt; (n = 124)&lt;sup&gt;d&lt;/sup&gt;</th>
<th>≥ 1 Assaultive Trauma (n = 113)&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms of PTSD Reported on DEQ</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>≤ 1 Symptom</td>
<td>40</td>
<td>93.0</td>
<td>101</td>
</tr>
<tr>
<td>2 Symptoms</td>
<td>3</td>
<td>7.0</td>
<td>19</td>
</tr>
<tr>
<td>Exceeded DEQ Cutoff&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0</td>
<td>0.0</td>
<td>5</td>
</tr>
<tr>
<td>Met Criteria for PTSD</td>
<td>0</td>
<td>0.0</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Percentages do not sum to 100 because a proportion of those who exceeded the DEQ cutoff also met criteria for PTSD.

<sup>a</sup>A "traumatic event" was defined as any event for which Criterion A2 was also endorsed. <sup>b</sup>Either no event was reported, or Criterion A2 was not endorsed for a reported event. <sup>e</sup>Reported a nonassaultive, and not an assaultive, trauma.

<sup>d</sup>Number of participants in this event category who also completed the DEQ. <sup>e</sup>Scored ≥ 26 or higher on DEQ.
Clinical Utility of a Brief Screening Question

Relationship of wording to response rates. The original version of the SCID screening question was compared to a revised, behaviorally-worded version that replaced the original language “being physically assaulted or raped,” with behaviorally-worded descriptions of sexual and physical assault. Among participants who reported an assaultive trauma on the TLEQ, comparisons of response rates in the behavioral ($n = 68$) and original wording conditions ($n = 65$) were conducted. (Only those participants who reported an assaultive trauma on the TLEQ were evaluated, since the behavioral revisions encompassed only the portions of the SCID screening question having to do with assaultive events.) No significant differences were found: the behaviorally-worded SCID screen identified 37% of survivors of assaultive trauma; and the unmodified version of the SCID identified 36% of survivors of assaultive trauma; $X^2(1, N = 134) = .054; p = .97$.

Relationship of instruction set to response rates. Prior to examining response rates for the two instruction sets (i.e., “Your response to the following question will be given to your provider...” versus “None of your responses will be shared with your provider...”), the success of the instructions were evaluated by examining the remaining participants’ responses to the manipulation check item on the Feedback Form (i.e., “The one-page SCID pink form that I just completed [circle one:] will / will not be given to my provider here at the health service”). Of the participants who completed the manipulation check item ($n = 271$), about one-third (32.1%; $n = 42$) in the “Won’t-Report” condition reported that the results would be given to their health care provider; while 38.6% ($n = 54$) of those in the “Will-Report” condition thought that the results would not be reported. The data was reanalyzed to ascertain that unfamiliarity with the English language was not...
a factor (it was not). Because these findings suggested the validity of the instruction sets was questionable, the relationship of response to instructions was not evaluated.

**Classification Efficiency of the Screening Question**

Using TLEQ and DEQ classifications respectively as criterion measures, the relative classification accuracy of DSM-IV Criterion A1, Part 1 of the SCID screening question, and the incremental validity of DSM-IV Stressor Criterion A2, Part 2 of the screening question, were evaluated by calculating sensitivity, specificity, positive predictive power and negative predictive power for each of these items. These values are presented in Table 6.

**Classification efficiency of the screen for identifying trauma survivors.** Using DSM-IV Criterion A1, Part 1 of the SCID screening question, as the criterion for exposure to any traumatic event correctly classified 232 of 336 participants (overall classification accuracy, or number of individuals correctly classified as trauma-positive or trauma-negative, was 69.0%). Sensitivity (i.e., the proportion of true trauma survivors as identified by the TLEQ that were detected by the SCID screen) was .65; specificity (i.e., the proportion of true non-survivors of trauma, as identified by the TLEQ, detected by the SCID screen) was .88; positive predictive power (i.e., the proportion of survivors of trauma identified by the SCID screen that were true survivors of trauma, as identified by the TLEQ) was .96, and negative predictive power (i.e., the proportion of non-survivors of trauma identified by the SCID that were true non-survivors of trauma, as identified by the TLEQ) was .35.

When Part 2, Criterion A2, was added to Part 1 of the SCID screen, 221 of 333 participants were identified (overall classification accuracy = 66.4%). Sensitivity was
Table 8

Performance of SCID Screening Question With and Without DSM-IV Posttraumatic Stress Disorder (PTSD) Criterion A2 for Identifying Exposure to Trauma as Measured by the TLEQ, and Symptoms of PTSD as Measured by the DEQ

<table>
<thead>
<tr>
<th>Variable</th>
<th>Criterion A1</th>
<th></th>
<th></th>
<th></th>
<th>Criterion A2</th>
<th></th>
<th></th>
<th></th>
<th>TLEQ Inventory</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to any trauma</td>
<td>.65</td>
<td>.88</td>
<td>.96</td>
<td>.35</td>
<td></td>
<td>.60</td>
<td>.95</td>
<td>.98</td>
<td>.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exposure to any assault</td>
<td>.77</td>
<td>.59</td>
<td>.56</td>
<td>.79</td>
<td></td>
<td>.73</td>
<td>.65</td>
<td>.58</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical assault</td>
<td>.74</td>
<td>.55</td>
<td>.29</td>
<td>.90</td>
<td></td>
<td>.76</td>
<td>.50</td>
<td>.27</td>
<td>.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual assault</td>
<td>.83</td>
<td>.56</td>
<td>.43</td>
<td>.89</td>
<td></td>
<td>.79</td>
<td>.62</td>
<td>.46</td>
<td>.88</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Symptoms of PTSD ≥ 2</td>
<td>.79</td>
<td>.50</td>
<td>.40</td>
<td>.85</td>
<td></td>
<td>.77</td>
<td>.56</td>
<td>.43</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meets criteria for PTSD</td>
<td>.94</td>
<td>.46</td>
<td>.19</td>
<td>.98</td>
<td></td>
<td>.88</td>
<td>.51</td>
<td>.20</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or exceeds DEQ cut-off</td>
<td>.94</td>
<td>.46</td>
<td>.19</td>
<td>.98</td>
<td></td>
<td>.88</td>
<td>.51</td>
<td>.20</td>
<td>.97</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Events Questionnaire; Sens. = sensitivity; Spec. = specificity; PPP = positive predictive power; NPP = negative predictive power. * A trauma is defined as any event for which both Criterion A1 and A2 were endorsed.
Clinical Utility of a Brief Screening Question

The classification efficiency of the screen for identifying survivors of assaultive trauma. The overall ability of the brief screening question to identify survivors of assaultive trauma was examined. Using as criterion the TLEQ classification of exposure to an assaultive trauma (i.e., both exposure to an assaultive event and fear, helplessness and/or horror reported), Part 1 of the screening question, Criterion A1, correctly classified 215 of 324 participants (overall classification accuracy = 66%). Sensitivity was .77; specificity was .60; positive predictive power was .56, and negative predictive power was .79. For identification of survivors of assaultive trauma, the kappa coefficient for agreement between Criterion A1 and the TLEQ was .36 (p < .001).

With the addition of Criterion A2 to Part 1 of the SCID screen, 219 of 322 participants were identified (overall classification accuracy = 68%). Sensitivity was .73; specificity was .65; positive predictive power was .58, and negative predictive power was .78. For identification of survivors of any assaultive trauma, the kappa coefficient for agreement between Criterion A2 and the TLEQ was .36 (p < .001).

The ability of the brief screening question to identify survivors of assaultive trauma was also examined by using data from the follow-up question to the SCID screen to classify SCID-responders as assaultive trauma survivors.\textsuperscript{13} Criterion A1 correctly

\textsuperscript{13} The follow-up question (presented as confidential and for research purposes only) asked participants to state the nature of the event(s) they had had in mind if they endorsed an event on the screen. Because not all participants who screened positive on the SCID
classified 256 of 327 participants (overall classification accuracy = 78.3%). Sensitivity was .48; specificity was .100; positive predictive power was .99, and negative predictive power was .73. For identification of survivors of assaultive trauma, the kappa coefficient for agreement between Criterion A1 and the TLEQ was .51 (p < .001).

With the addition of Criterion A2 to Part 1 of the SCID screen, 252 of 326 participants were identified (overall classification accuracy = 77.3%). Sensitivity was .45; specificity was .100; positive predictive power was .98, and negative predictive power was .73. For identification of survivors of any assaultive trauma, the kappa coefficient for agreement between Criterion A2 and the TLEQ was .49 (p < .001).

Classification efficiency of the SCID screen for identifying symptoms of PTSD. Using as criterion the DEQ classification of participants who met criteria for PTSD (i.e., endorsed items that met DSM-IV-defined criteria for the three symptom clusters, or met the DEQ cutoff score of 26; Kubany et. al, 2000), Part 1 of the screening question, Criterion A1, correctly classified 159 of 283 participants (overall classification accuracy = 56.2%). Sensitivity was .96; specificity was .48; positive predictive power was .27, and negative predictive power was .98. For identification of participants who met criteria for PTSD, the kappa coefficient for agreement between Criterion A1 and the TLEQ was .22 (p < .001).

With the addition of Criterion A2 to Part 1 of the SCID screen, 169 of 280 participants were identified (overall classification accuracy = 60%). Sensitivity was .92; screen reported an event on the follow-up question, this resulted in a smaller proportion of individuals classified as assault survivors.
specificity was .54; positive predictive power was .29, and negative predictive power was .97. For identification of individuals who met full symptom criteria for PTSD on the DEQ, the kappa coefficient for agreement between Criterion A2 and the TLEQ was .24 ($p < .001$).

**Acceptability of the Screening Procedure**

Descriptive analyses were performed to determine general ease of administration and acceptability of the screening procedure to participants.

**Completion of the SCID screen versus the TLEQ.** As noted previously, all participants who completed at least the SCID screen and TLEQ were included in analyses. A total of 338 participants completed the SCID screen and 339 participants completed the TLEQ. Of the 388 participants who agreed to participate in the study, four were excluded because they were called in before completing the SCID. The other 45 who were eliminated completed the SCID but did not finish the TLEQ. Thirty-six of these women were called in to their appointment with the provider before completing the TLEQ; the remainder failed to finish for assorted other reasons; e.g. got a cell-phone call, left the clinic before meeting with a provider. Participants completed the screening

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14 The participant who did not complete the SCID was in the “Will Report” condition, and told the research assistant that she had not done so because she did not want the information to be given to her provider. She did go on to complete the other forms, including the TLEQ, on which she reported several assaultive traumas.
question in an average time of 34.7 seconds. The TLEQ was completed in a mean 234 seconds, or 3.9 minutes.

Thirty-one of the 339 participants who completed the TLEQ were interrupted for clinic business (e.g., called to the front desk to provide more information) while in the process of completing the questionnaire; four were interrupted while completing the SCID screening question. Thirty-eight of the participants were called in for their meeting with the provider before finishing the questionnaire packet but took the packet with them, completed it out of viewing range of the research assistant, and returned it after the appointment. Very few participants requested questionnaire-specific help during either the administration of the SCID screen (.009%, \( n = 3 \)) or the TLEQ (.006, \( n = 2 \)).

**Participant feedback.** The participant Feedback Form was completed by 297 participants. Items and responses are presented in Table 7. The majority of participants reported that their responses on both the SCID screen (89.4%) and the TLEQ (90.1%) were honest, and that they were not uncomfortable or embarrassed by either the SCID (90.6%) or the TLEQ (82.0%). While 12% of responders did not agree that medical healthcare providers should screen patients for exposure to traumatic life events, 41% were neutral, and 49% agreed with this statement. Feeling bad or remembering upsetting things to a mild or strong degree were reported by 1/3 (33.0%) of the sample. The DEQ total symptom score was positively correlated with feeling bad or remembering upsetting things after answering questions about traumatic life events; \( r (297) = .35, p < .01 \).

**Discussion**

The purpose of this investigation was to evaluate the validity and utility of a brief screening question about exposure to traumatic life events in a primary care setting. This
<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Answering the Pink Form made me feel uncomfortable or embarrassed.</td>
<td>1.87</td>
<td>1.13</td>
</tr>
<tr>
<td>4</td>
<td>Answering the Blue Form made me feel uncomfortable or embarrassed.</td>
<td>2.16</td>
<td>1.25</td>
</tr>
<tr>
<td>5</td>
<td>I was completely honest in my answers on the Pink Form.</td>
<td>4.59</td>
<td>1.02</td>
</tr>
<tr>
<td>6</td>
<td>I was completely honest in my answers on the Blue Form.</td>
<td>4.60</td>
<td>0.97</td>
</tr>
<tr>
<td>7</td>
<td>I would be completely comfortable completing the Pink Form while waiting</td>
<td>3.52</td>
<td>1.37</td>
</tr>
<tr>
<td></td>
<td>to see my healthcare provider even if I knew in advance that he or she</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>would receive my responses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I would be completely comfortable completing the Blue Form while waiting</td>
<td>3.26</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>to see my healthcare provider even if I knew in advance that he or she</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>would receive my responses.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 7 (cont.)

*Participants' Responses to Feedback Form*

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Answering questions about traumatic life events caused me to feel bad or remember things that are upsetting to me.</td>
<td>2.88</td>
<td>1.30</td>
</tr>
<tr>
<td>10</td>
<td>In my opinion, medical healthcare providers should routinely screen patients for exposure to traumatic life events.</td>
<td>3.46</td>
<td>1.00</td>
</tr>
</tbody>
</table>

*Note.* SCID = Structured Clinical Interview for DSM-IV; TLEQ = Traumatic Life Events Questionnaire.

Feedback Form ratings were made on a 5-point Likert-type scale. Higher scores indicate greater agreement with the item.

* The TLEQ and SCID were color-coded for ease of reference. "Pink Form" refers to the SCID screen.  
  "Blue Form" refers to the TLEQ.
is the first of any published studies to examine the usefulness of screening for traumatic life events among college women in a university healthcare setting; and also the first study to evaluate within-participant differences in reporting of traumatic life events on a brief self-administered screening measure versus a more exhaustive self-administered measure of traumatic life events. Results suggest that brief screening may be an acceptable alternative for the identification of trauma survivors in settings where more thorough, time-consuming alternatives to trauma assessment are not viable.

High rates of exposure to traumatic life events in this ethnically-diverse sample of female university health-service patients were reported. A large proportion (85%) reported experiencing any traumatic event; and 41% of the women reported one or more experiences of either traumatic physical assault, sexual assault, or both. These rates are high, but are consistent with rates of trauma-exposure and assaultive trauma-exposure reported for similar (i.e., female, college-student) populations (e.g., Green et al., 2000; Fillingim et al., 1999; McGruder-Johnson, et al, Mills & Granoff, 1992; Vrana & Lauterbach, 1994); and primary-care populations (e.g., Bruce et al., 2001, Rosenberg et al., 2000). It should be noted that a relatively conservative definition of assaultive trauma was used in the present study. Disturbingly high rates of stalking (27% of participants) and witnessing family violence as a child (23% of participants) were reported in this sample. If these events had been included in the definition of assaultive events, as some investigators have done (e.g., Pimlott-Kubiak & Cortina, 2003), a much higher rate for assaultive trauma would have been derived.

In addition, a relatively substantial minority of the group reported significant PTSD symptomatology. More than one-quarter of the sample reported 2 or more
symptoms of PTSD on the DEQ, and 11 percent met symptom criteria for PTSD on the DEQ, which is comparable to lifetime rates of PTSD among women reported by Breslau et al., (11.3%, 1991), and Kessler et al., (10.4%; 1995). If participants who met or exceeded the DEQ cutoff established by Kubany et al. (2000) are added to the latter group, 17% of this sample exhibited a significant degree of PTSD symptomatology, approximating questionnaire-derived rates of PTSD reported for female primary care patients by Dobie et al., (20.8%; 2004).

As expected, assaultive traumatic events were significantly more likely to be associated with symptoms of PTSD, as reported on the DEQ, than were nonassaultive events. Among those women who had experienced one or more experiences of assaultive trauma, more than one-quarter met full symptom criteria for PTSD. Again, this is congruent with reported rates of PTSD for female victims of assaultive trauma (e.g., 20.8%, Breslau et al., 1998; 25.8%, Resnick et al., 1993).

The overall ability of the brief screening question to identify trauma survivors and symptomatic individuals was examined. Compared to the SCID screen, the more comprehensive TLEQ assessment increased the number of participants reporting any traumatic event from 50.1% to 84.9%. At the same time, the positive predictive value of the SCID screen for identifying a trauma survivor (i.e., proportion of survivors of trauma identified by the SCID screen that were true survivors of trauma) was 98%; that is, virtually all of the women who reported a traumatic event on the SCID screen were also classified as trauma survivors by the TLEQ.

Utilizing the follow-up question to the SCID screen to classify reported traumas as assaultive, about half of the participants who reported an assaultive trauma on the TLEQ
explicitly listed an assaultive trauma as one of the referent events for their positive SCID response. For practical purposes, however, only a positive response to the screen would serve to identify patients who would merit follow-up. Using a positive response to the SCID screen as criterion identified more than three-quarters of the survivors of traumatic assault. Finally, and perhaps most importantly, almost all of the women who reported significant PTSD symptomatology were identified by the screening question. Using the TLEQ identified only 2 additional women of the 47 who met symptom or DEQ cutoff criteria for PTSD. This is similar to the findings of Franklin et al. (2002), who found that the brief SCID screening question for PTSD failed to identify only 4% of those respondents who subsequently met criteria for PTSD.

The incremental validity of DSM-IV Stressor Criterion A2 was examined for its ability to identify trauma-exposure over and above that of Criterion A1. The finding that the addition of the Criterion A2 inquiry slightly improved the specificity, and slightly decreased the sensitivity, of the Criterion A1-based Part 1 of the SCID screen that inquires only about trauma exposure is in agreement with findings of Breslau & Kessler (2001), who noted the high specificity of the criterion relative to A1 alone. Specifically, for identifying individuals who were trauma-positive, assaultive-trauma positive, or reported a significant level of symptomatology on the DEQ, addition of Stressor Criterion A2 to the Criterion A1-based Part 1 of the SCID screen resulted in a reduction in the number of false positives and an increase in the number of false negatives identified. The decision about whether or not to include A2 as criterion in a screening question, then, as discussed earlier, would largely depend on setting-specific variables, and the relative costs associated with misidentification versus failing to identify patients.
There were no significant differences in the ability of the behaviorally-worded version of the SCID screen versus the original, non-behaviorally worded version of the SCID screen to identify survivors of assaultive trauma. This was an unexpected finding given the evidence that traumatic-event assessments that include behaviorally-worded examples of assaultive trauma are more likely to elicit positive responses (Koss, 1985; Kilpatrick et al., 1987). Because a proportion of the sample did not speak English as their first language (16.5%, n = 56), this group was eliminated from the analyses, and the data was reanalyzed. Again, no significant differences between the groups were detected.

Several factors may account for this result. It may be that, given the voluntary nature of the questionnaire and the hurried atmosphere of the clinic, participants devoted less than full attention to written materials. As discussed below, almost one-third of the sample were found to endorse an option on the manipulation check that was the opposite of the condition to which they were assigned (e.g., said their responses would be given to the provider although they had been instructed that their reports were confidential), suggesting that they did not closely attend to wording.

Another possible explanation is that this university-educated sample is more knowledgeable about the nature and definition of physical and sexual assault than individuals in earlier studies, so that the expanded definition of assault is superfluous. Or, given that the most recent investigation of this question was conducted more than 15 years ago (Kilpatrick et al., 1987), it may be that this contemporary cohort of females is better educated about the nature of physical and sexual assault because of the increased public awareness and discussion of these issues.
With respect to the acceptability of the screening measures, participants were by self-report generally comfortable, honest, and unembarrassed in responding to both the SCID and the TLEQ; although about a third of the participants, particularly those who also reported symptoms of PTSD on the DEQ, reported that answering questions about traumatic life events was at least mildly distressing to them. Not surprisingly, the brief screen took significantly less time to self-administer than did the TLEQ—participants completed the screening question in about an eighth of the time it took to complete the TLEQ—and accordingly, it was more likely to be completed before participants were interrupted or called in to their appointment.

Several limitations in the current study limit inferences that can be drawn. The intent of the present study was to examine the utility of assessing trauma history in primary care patients. However, because only female college-student healthcare patients were evaluated, the generalizability of the results to other primary-care populations cannot be assumed.

In addition, because of the single-source, self-report nature of the data, common method variance or response-consistency bias could potentially explain some significant relationships. Participants may have felt obliged to report trauma exposure on the TLEQ that was congruent with their response on the SCID screen; or alternatively, may have been constrained from reporting an event on the TLEQ because they had not reported it on the SCID. They may have been prompted to report more symptoms on the DEQ, by virtue of having reported trauma-exposure, than they would have reported had they asked about symptoms independent of questions about trauma-history (Resnick et al., 1993).
Another limitation of the study is that only the DEQ was used to assess trauma-related symptoms. As is well-documented, survivors of trauma may develop disabling problems other than PTSD symptomatology, such as depression, panic disorder, substance abuse, or eating disorders. Although the present study suggests that a single question about exposure to traumatic life events may be sufficient to identify most individuals who are experiencing significant symptoms of PTSD, it cannot be assumed that the abbreviated method would identify individuals who are experiencing other trauma-related problems.

Unfortunately, the fact that one-third of the participants’ reported expectations on the manipulation-check about the disposition of their screen results did not match their assigned condition made it impossible to assume that any of the participants understood the instructions, and the analysis of anonymity and disclosure had to be abandoned. The fact that a sizeable proportion of the participants did not appear to read and/or understand instructions poses a concern for the validity of all of the self-reported findings, since they relied on participants’ comprehending the material being inquired about. However, the fact that most results (e.g., prevalence of trauma-exposure and PTSD symptomatology) were compatible with current research findings strengthens confidence in the validity of the data. It is also possible that this finding is less a function of comprehension than one of believability—i.e., some participants may have concluded, a priori, that all of their responses were intended as research data, rather than clinic information, given the visible presence of research assistants in the clinic, and the presentation of a consent form and questionnaires to patients. Still, the apparent lack of congruence between instructions as presented and instructions as perceived emphasizes the importance of future efforts
aimed at presenting instructions in ways demonstrated to optimize respondent comprehension (e.g., presenting instructions in both oral and visual modalities; computerized presentation).

Another possible threat to the internal validity of this study was the ability of participants to review or revise their previous answers, or complete material out of order. This was controlled for as much as possible by instructing research assistants to monitor participants’ completion of materials, and note in the logs whenever participants were seen to review or change earlier answers, and/or move out of monitoring range. Still, it is possible that some participants were able to make changes to previous answers, or to review experimental instructions before answering the manipulation check, without being observed.

The implementation of computer-administered screening, unfortunately not feasible in the present study, might have attenuated some of these problems. Substantial evidence suggests that computerized instruments can be reliable, valid, and equivalent to interview and questionnaire versions of the same instruments (e.g., Wood, Garb, Lilienfeld, & Nezworski, 2002). A computerized administration of the screening packet would have afforded absolute control of the sequence of presentation; participants would not be able to review or alter their previous answers. It is possible that the experimental conditions would have been more successful, for example, with computer-generated presentation of the instructions. Disclosure rates might have been higher: studies have found that patients are more likely to disclose information of a sensitive nature to a computer than to a clinician in areas such as substance abuse (Lucas, Mullins & Luna, 1977) and high-risk sexual behavior (Locke et al., 1992), and patients report feeling less
embarrassed giving information to a computer than to a clinician (Kobak, Reynolds, & Griest, 1994). In addition, it is likely that more participants would have completed the DEQ before being called in to their appointment, since computerized measures typically require minimal administration and scoring time when compared to their paper-and-pencil counterparts (Kobak et al., 1997). Thus, use of a computer-administered screen for traumatic life events may have facilitated both staff and participant cooperation by minimizing time and effort required, and enhanced reporting of sensitive information. Future studies that seek to enhance the utility of screening in medical settings would do well to utilize a computerized mode of screen administration.

It is important to emphasize that the purpose of this study was not to evaluate the psychometric merits of the SCID screening question in and of itself, but rather the utility of a brief screening question about exposure to trauma. The SCID screening question was chosen as an example of one of the more widely-used such screens. Although results of the study suggest that the SCID screen may, at least in some settings, be an acceptably sensitive and specific means of identifying traumatic life event survivors, it will be important to clarify in future investigations the incremental utility of limiting such screening to survivors of assaultive trauma, given the higher risks associated with this group; and/or including an inquiry about specific symptoms with a question about trauma exposure.

The current study did not assess several crucial aspects of clinical utility. Although the brief screening approach to trauma exposure assessment in the present study proved to be quick and easy to administer and was acceptable to patients, it was not possible to assess provider acceptability, which is an important limiting factor in the success of a screening
program (Maruish, 2000; Shedler, Beck, & Bensen, 2000). If screening efforts are to be clinically useful, practitioners must routinely refer to and act on results (Williams et al., 1999). Studies that have examined the utility of psychological screening in medical settings suggest that practitioner responses are more likely to be elicited when administering and scoring methods are brief and unobtrusive, when no more than minimal practitioner involvement is required (e.g., scores do not require interpretation, only positive screening results are provided), when education is provided regarding the screening target and rationale for screening, and, finally, when a clearly-defined protocol exists for responding to positive screening results. Although this study also did not address the issue of follow-up on positive screening results, both the empirical literature and the researchers’ experience in the present study setting suggest strongly that provider follow-up interviews, or even further assessment measures, are not likely to be feasible in this, and probably most, busy primary care settings. In any case, were such setting-costly protocols to be implemented, it would be preferable to adopt a screening test that yielded a high PPP (i.e., a high proportion of those identified as trauma-exposed are truly trauma-exposed individuals in need of further assessment), as opposed to one such as the SCID screening question used in the current study, which tended to be more sensitive, but less specific.

As previously noted, ultimately, a screening procedure cannot be considered clinically useful unless it can be demonstrated that its use enhances the likelihood of an outcome that benefits either the individual, or the system (Maruish, 2000). Further research is needed to document any gains afforded by identifying and intervening with a trauma-exposed student-health center population.
Appendix A

Traumatic Life Events Study

Project Description

Dear Student:

You are being invited to participate in a brief research study about traumatic life events while you await your meeting with the medical provider today.

If you have NOT already participated in the study, and are 18 years of age or older, you are eligible to participate. If you are interested, please read the entire consent form on the next page, and if you agree to participate, you can go ahead and fill out the attached packet of questionnaires.

If you are not eligible or not interested, please return these forms to the investigator now.

Mahalo!
Appendix B

Research Description and Consent Form

Title of Study: Traumatic Life Events Study

Investigators: Susan Watson, M.A., University of Hawaii, Dept. of Psychology
Stephen Haynes, Ph.D., University of Hawaii, Dept. of Psychology

Description: The purpose of this study is to evaluate the usefulness of screening questionnaires that assess exposure to traumatic or stressful life experiences. Information from this investigation will be used to help develop programs to promote college students' mental health and well-being.

Procedures: If you agree to participate, you will be given a short set of questionnaires to complete while you are waiting to meet with your healthcare provider today. The questionnaires take about 5 or 10 minutes to complete. You'll be asked whether you have been exposed to different stressful or traumatic life events, and, if so, about certain kinds of reactions you may have experienced. In order to avoid biasing the outcome of this study, some details of the study may not be made available to you until you complete the questionnaires. Immediately after you complete the questionnaires, you will receive a handout that explains in detail the nature and purposes of our research, and the research assistant or one of the investigators will answer any questions you might have. You will also receive a handout that contains information about traumatic life experiences and relevant community resources.

Anonymity: You will NOT be asked to give us any identifying information, such as your name, student number, etc. The questionnaires you complete will be identified only by
code number. Your packet of questionnaires will be retained by the researcher, who will keep the results confidential. Thus, your name will never be associated with any information you provide.

**Anticipated Risks & Benefits:** The potential risk or discomfort to you as a participant in this research project is the possibility of emotional upset at being reminded of a distressing experience. In the unlikely event you do feel distressed, counselors at the Student Counseling and Development Center are available to talk to you about this. You can go there now or call 956-7927.

A potential benefit to you is knowing that you are contributing to a scholarly investigation designed to increase our ability to provide effective services to college students, and to increase our knowledge of the impact of stressful and/or traumatic events.

**Special Circumstances:** Your participation in the study is strictly voluntary and will not affect the services you receive at the University Health Services. You may either refuse to participate or withdraw from the study at any time without any penalty to you.

If you have any questions about the research or if you would like a copy of the results when the study is completed, you can contact the Project Director, Susan Watson, or Dr. Stephen Haynes, in the Department of Psychology (Gartley Hall, University of Hawaii) at (808) 956-7644 or 956-8414.

**IF YOU FEEL FULLY INFORMED ABOUT THE STUDY AND ARE WILLING TO PARTICIPATE, PLEASE FILL OUT THE ATTACHED MATERIALS NOW. YOUR PARTICIPATION WILL BE GREATLY APPRECIATED. YOU MAY RETAIN THIS FORM FOR YOUR RECORDS**

(If you cannot obtain satisfactory answers to your questions or have comments or
complaints about your treatment in this study, contact: Committee on Human Studies, University of Hawaii, 2540 Maile Way, Honolulu, HI 96822. Phone: 808-956-5007.)
NOTE:
Unlike the other questionnaires you will be asked to complete, which are completely confidential, your response to the following question WILL BE GIVEN TO YOUR PROVIDER to aid in your health care at the clinic:

SCIDS-1

Sometimes things happen to people that are extremely upsetting—things such as being in a life-threatening situation such as a major disaster, very serious accident or fire; being hit, kicked, punched, or otherwise physically hurt by someone; being forced or coerced into any kind of sexual activity that you did not want; seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?

(Check one) Yes____ No____

(If you answered yes) When the event or events happened, were you very afraid, or did you feel horrified or helpless? (Check one) Yes____ No____

PLEASE PUT THESE FORMS IN THE ENVELOPE AND RETURN TO THE RESEARCH ASSISTANT AS SOON AS YOU HAVE COMPLETED THEM.
NOTE:

Your response to this item and all other material in this packet is FOR RESEARCH PURPOSES ONLY. It is strictly CONFIDENTIAL and ANONYMOUS.

NONE of your responses will be shared with your provider or any health clinic staff.

SCIDS-2

Sometimes things happen to people that are extremely upsetting—things such as being in a life-threatening situation such as a major disaster, very serious accident or fire; being physically assaulted or raped, seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?

(Check one) Yes____ No____

(If you answered yes) When the event or events happened, were you very afraid, or did you feel horrified or helpless? (Check one) Yes____ No____

PLEASE PUT THESE FORMS IN THE ENVELOPE AND RETURN TO THE RESEARCH ASSISTANT AS SOON AS YOU HAVE COMPLETED THEM.
NOTE:

Unlike the other questionnaires you will be asked to complete, which are completely confidential, your response to the following question WILL BE GIVEN TO YOUR PROVIDER to aid in your health care at the clinic:

SCIDS-3

Sometimes things happen to people that are extremely upsetting—things such as being in a life-threatening situation such as a major disaster, very serious accident or fire; being physically assaulted or raped, seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?

(Check one) Yes ___ No ___

(If you answered yes) When the event or events happened, were you very afraid, or did you feel horrified or helpless? (Check one) Yes ___ No ___

PLEASE PUT THESE FORMS IN THE ENVELOPE AND RETURN TO THE RESEARCH ASSISTANT AS SOON AS YOU HAVE COMPLETED THEM.
NOTE:

Your response to this item and all other material in this packet is FOR RESEARCH PURPOSES ONLY. It is strictly CONFIDENTIAL and ANONYMOUS. NONE of your responses will be shared with your provider or any health clinic staff.

SCIDS-4

Sometimes things happen to people that are extremely upsetting— things such as being in a life-threatening situation such as a major disaster, very serious accident or fire; being hit, kicked, punched, or otherwise physically hurt by someone; being forced or coerced into any kind of sexual activity that you did not want; seeing another person killed or dead, or badly hurt, or hearing about something horrible that has happened to someone you are close to. Have any of these kinds of things ever happened to you?

(Check one) Yes  No

(If you answered yes) When the event or events happened, were you very afraid, or did you feel horrified or helpless? (Check one) Yes  No

PLEASE PUT THESE FORMS IN THE ENVELOPE AND RETURN TO THE RESEARCH ASSISTANT AS SOON AS YOU HAVE COMPLETED THEM.
Appendix D

PERSONAL INFORMATION FORM

Your Age____

Year in School (CHECK ONE): ___ Freshm

 ___ Soph

 ___ Junior

 ___ Senior

 ___ Grad

Marital Status (CHECK ONE):

Married___ Remarried___ Divorced___ Separated___ Widowed___ Never Married___

Your primary (preferred) ethnicity:__________________________

Your first or primary language:

 ___ English

 ___ Other (Please describe:)__________________________
Appendix E

Traumatic Life Events Questionnaire (Kubany, Haynes, et al., 2000)
Appendix F

Distressing Event Questionnaire (Kubany et al., 2000)
Appendix G

Feedback Form

Date ____________ RA ___________ Participant # ___________

Feedback Form

The following questions ask for your evaluation of the questionnaires you just completed. Please be honest! Your answers to these questions will help us evaluate the results of this study.

IN THIS STUDY, YOU WERE ASKED ABOUT EXTREMELY UPSETTING OR TRAUMATIC LIFE EXPERIENCES IN TWO DIFFERENT WAYS.

- One of the questionnaires was a PINK form that was one page long and asked you to indicate whether you had ever experienced any distressing events by just checking “yes” or “no”.

- The other questionnaire was a BLUE form that was two pages long and asked many specific questions about many different kinds of traumatic events.

THE FOLLOWING ITEMS ASK YOU TO COMPARE AND EVALUATE THESE TWO FORMATS:

PLEASE READ THE FOLLOWING TWO STATEMENTS AND CIRCLE THE CORRECT OPTION FOR EACH:

1. The one-page PINK Form that I just completed [CIRCLE ONE:] WILL // WILL NOT be given to my provider here at the health service

2. The two-page BLUE Form that I just completed [CIRCLE ONE:] WILL // WILL NOT be given to my provider here at the health service

PLEASE READ EACH OF THE FOLLOWING STATEMENTS AND THEN CIRCLE A NUMBER TO INDICATE HOW MUCH YOU AGREE WITH THE STATEMENT.

3. Answering the Pink Form made me feel uncomfortable or embarrassed.

1 strongly disagree 2 mildly disagree 3 neutral 4 mildly agree 5 strongly agree
4. Answering the **Blue Form** made me feel uncomfortable or embarrassed.

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

5. I was completely honest in my answers on the **Pink Form**.

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

6. I was completely honest in my answers on the **Blue Form**.

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

7. I would be completely **comfortable** completing the **Pink Form** while waiting to see my healthcare provider even if I knew in advance that he or she would receive my responses:

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

8. I would be completely **comfortable** completing the **Blue Form** while waiting to see my healthcare provider even if I knew in advance that he or she would receive my responses:

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

---

**THE FOLLOWING ITEMS ASK FOR YOUR OPINION ABOUT TRAUMATIC LIFE EVENT SCREENING, IN GENERAL:**

9. Answering questions about traumatic life events caused me to feel bad or remember things that are upsetting to me.

   1  2  3  4  5
   strongly  mildly  neutral  mildly  strongly
   disagree   disagree    agree   agree

10. In my opinion, medical healthcare providers should routinely screen patients for exposure to traumatic life events.

    1  2  3  4  5
    strongly  mildly  neutral  mildly  strongly
    disagree   disagree    agree   agree
Appendix H

Screening Log

<table>
<thead>
<tr>
<th>Date</th>
<th>RA</th>
<th>Participant #</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. SCID portion of the session: Start: ___ am/pm End: ___ am/pm
2. TLEQ portion of the session: Start: ___ am/pm End: ___ am/pm

3. **SCID Session completed?**  yes no
   - 3a. ___ participant called in to medical consultation
   - 3b. ___ participant refused to complete (explain below): 
   - 3c. ___ other (explain below):

4. **TLEQ Session completed?**  yes no
   - 4a. ___ participant called in to medical consultation
   - 4b. ___ participant refused to complete (explain below): 
   - 4c. ___ other (explain below):

**Session Events** (check all that occurred):

5. ___ participant questions or requests for help
   - 5a. Number of questions or requests for help: 1 2 3 4 or more times
   - 5b. Occurred during administration of: SCID [ ] TLEQ [ ] Other [ ]
   
   Describe:

6. ___ session was interrupted
   - 6a. Number of interruptions: 1 2 3 4 or more times
   - 6b. Occurred during administration of: SCID [ ] TLEQ [ ] Other [ ]
   
   Describe:

7. ___ participant appeared distressed.
   - 7a. Occurred during administration of: SCID [ ] TLEQ [ ] Other [ ]
   
   Describe:
Exposure to Traumatic Events

Many types of highly stressful events are often considered “traumatic” and can have negative effects on a person’s emotional well-being or quality of life. A traumatic event is a terrifying event or ordeal that a person has experienced, witnessed or learned about, especially one that is life-threatening or causes physical harm. It can be a single event or repeated experience. Common traumatic events include serious accidents, being physically or sexually assaulted or abused, natural disasters, the sudden death of a loved one. When people experience these events, they may be terrified, horrified, or feel helpless.

Unfortunately, traumatic life events are common—most people will experience at least one potentially traumatic event in their lifetime. It is important to know that most people who experience traumatic events do NOT suffer any long-lasting or disabling effects. Thus, even if you have experienced a terrible event or events at some time in your life, you may have recovered fully and have no significant trauma-related problems.

However, some people who are exposed to a traumatic event experience troubling or distressing feelings, thoughts, or symptoms that don’t seem to go away, even with the passage of time. In case you fall into this latter group, we believe that it is important for you to know about the kinds of problems that traumatic events can cause—because it may help explain problems you may be having which have you puzzled, and may help you realize you have options or choices that you didn’t know you have. This information may also help you to better understand or care for a loved one who has experienced a traumatic

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6 Adapted from a handout prepared by Edward S. Kubany, Ph.D.
event and is having some problems.

After people experience a traumatic event, they may develop symptoms of post-traumatic stress. When really bad things happen to people, these are the symptoms that often develop—they are normal human reactions to extreme stress. They have nothing to do with a person’s personality or strength of character and do not mean that the person is crazy or is going to go crazy.

For most people, these symptoms begin to lessen in a few weeks or months. But sometimes, symptoms of post-traumatic stress persist and interfere with daily life in some way. For example, some trauma-survivors may continue to relive the event through recurring nightmares or other intrusive images that occur at any time. They may have extreme emotional or physical reactions such as chills, heart palpitations or panic when faced with reminders of the event. They may feel as if they are “on guard” at all times, including feeling irritable or angry, having difficulty sleeping or concentrating, or being overly alert or easily startled. Sometimes people become so distressed by memories of the trauma that they begin to live their lives trying to avoid any reminders of what happened to them. They feel emotionally detached, may begin to withdraw from friends and family, or lose interest in everyday activities. Traumatic events can also be partially or even largely responsible for other problems, such as depression, panic attacks, alcohol or drug abuse, eating disorders, suicidal impulses, high-risk sexual behaviors that may result in unintended pregnancy or sexually transmitted diseases (STDs), including HIV, or other high-risk behavior that may be life-endangering, such as fast or reckless driving. In addition, traumatic events can even have negative effects on a person’s physical health or medical problems, including chronic pain with no medical basis (frequently gynecological
problems in women), stress-related conditions such as chronic fatigue syndrome or fibromyalgia, stomach pain or other digestive problems such as irritable bowel syndrome, headaches, sleep disorders, and an assortment of other physical problems.

Other problems related to experiencing a traumatic event are particularly important to know about because working them out can contribute to recovery from the effects of posttraumatic stress. These problems are trauma-related guilt, trauma-related anger, and grief over physical or symbolic trauma-related losses. Trauma-related guilt, in particular, is an extremely common problem among trauma survivors. Survivors frequently feel guilty about what happened and may mistakenly believe they are to blame. However, it may be very important to know that such guilt often has no logical or rational basis. Getting rid of guilt can often help trauma survivors feel much better and improve their self-esteem.

If someone has trauma-related problems that are severe, and if they have not gone away by 3 to 6 months after the trauma has ended, therapy or counseling may help. This does not mean that a person with these symptoms has to do something about it now—or ever! It is important to understand that people respond differently to trauma. Some people will have a few problems, and these problems may go away without treatment. Others may need counseling or some kind of support to help them move forward with their lives.

Trauma survivors who are experiencing persistent problems related to the trauma may be reluctant to seek help for a number of reasons. First, people don’t always make the connection between the traumatic event and the emotional emptiness, anger, anxiety and sometimes physical symptoms they unexpectedly find themselves feeling months, even years, after the trauma. The survivor may feel that their experience is too personal, painful or embarrassing to discuss. They may hope, or even expect, to be able to “handle it” and
“get over it” on their own; or they may decide to address trauma-related problems later when they feel “stronger” or “more ready” to deal with the issues. Survivors who suffer from trauma-related guilt may believe they deserve the hurt and pain.

Often, trauma survivors choose to avoid dealing with anything related to the trauma because this method of coping has worked in the past. It is perfectly okay to do this. Trying not to think about what happened is a very common way that many survivors cope with the trauma. But, even though it is completely natural not to want to talk about painful life experiences, it may actually be helpful to talk about what happened. For many trauma survivors, talking or thinking about the trauma can help to take the charge out of painful memories, gain new insights about the trauma, and put what happened into proper perspective.

In conclusion, knowing the effects that traumatic events can have on emotional and physical health may be empowering, by providing you with choices you didn’t realize you had. Knowing about the effects that trauma can have may help to make sense out of some problems, which in the past have seemed “weird” or hard to explain.

If you would to talk further about any of this with a mental health professional, the Counseling and Student Development Center, Queen Lili`uokalani Center for Student Services, Room 312, offers a variety of counseling services to UHM students. You can contact them at 956-7927. Or, you can refer to the list of community resources we have provided.
Appendix J

Debriefing Handout

The Purpose of this Study

The study that you have just participated in involves the measurement of traumatic life events. You answered a single question that asked about stressful or traumatic events and then answered a series of questions that asked about many different types of stressful events that are often traumatic. Finally, you were asked questions about symptoms of posttraumatic stress—problems that can be caused by traumatic events. The other handout you have received in this packet describes in detail what defines an event as "traumatic," what kind of problems are sometimes associated with traumatic events, and a list of resources in the community for people who are experiencing trauma-related problems.

In this handout, we describe for you the goals of our research study—what specific questions we are asking in the investigation.

An important purpose of our study is to develop more effective ways to screen university health care patients for exposure to traumatic events. It is important to note, first, that many people who experience a traumatic event are doing fine and don’t have any serious problems. However, there is much research to show that people who ARE having problems related to a traumatic experience often don’t get the help they need. They may not realize that help is available. They may not wish to reveal sensitive information or talk about personal experiences with their medical provider. Sometimes, they don’t realize that problems they are having are related to the traumatic experience. Identifying such people in order to give them information about the resources that are available to them may be extremely important—perhaps even life-saving in a few cases.
Because of these difficulties, a central goal of the study is to learn about more useful and sensitive ways to ask people about traumatic experiences. Is it better to just ask one quick, open-ended question about traumatic experiences, or does it help people to remember better if they are presented with a list of possible events? Recall that you were first asked a general question about your exposure to any kind of traumatic event, and you were then presented with a list of twenty different kinds of events, and asked about these individually. You may have found this all to be rather repetitive! That is because we will be comparing the relative merits of all these approaches for eliciting responses.

We also varied the instructions that prefaced the first question. Some participants were told that their responses might be shown to the provider, and some were told the responses would not be shown to any clinic personnel. In truth, none of any of the material answered by you today will be shown to your provider or anyone in the clinic. It will remain strictly confidential and anonymous. We are trying to discover if people are less willing to report sensitive or private material if they believe that the information will be shown to their medical provider. If that turns out to be the case, it may be helpful to develop ways to allow trauma survivors to receive appropriate self-help or community resources while retaining their anonymity; e.g., via computerized screening.

We will analyze our data to examine the usefulness of screening in this setting by examining several factors: the proportion of students who report any traumatic life events, the proportion of students who report exposure to particularly high-risk traumatic events, such as sexual assault, and the proportion of students who report events and also report problems related to the trauma. We'll also be looking at participants' evaluation of the screening process.
Again, thank you very much for your participation in this study—your contribution is valuable to us. **We ask that you not discuss the specific details of the study or the contents of this debriefing handout with other students who might still participate.** Knowing ahead of time about the design and purposes of the study could bias their responses, and thus hamper our ability to derive useful information from the study.

If you have any further questions about the study, or about traumatic life events or post-traumatic stress, you can contact the Project Director, Susan Watson, or Dr. Stephen Haynes in the Department of Psychology (Gartley Hall, University of Hawaii) at (808) 956-7644 or 956-8414.
Appendix K

Procedures for Research Assistants

**Important:** Remember at all times that we are guests at the Health Clinic; they are graciously permitting us to collect data there, despite the fact that this may cause them some inconvenience. We want to minimize that inconvenience as much as possible! So, be friendly and polite, but also be as unobtrusive and inconspicuous as possible. Be particularly sensitive about not interrupting clinic routines—e.g., don’t impede students’ entry or exit, don’t interrupt the staff if they are in the middle of doing something, don’t take up a seat in the waiting room if it means a clinic patient will have to stand.

If any “systems” problems or conflicts occur while you are at the clinic—or if you sense there could be a problem in the making, please record it in the Data Collection Log and then talk to me immediately.

**Data Collection Procedures**

*Setting up*

1. Before you go to the clinic, pick up your materials at [the designated place]:
   - 2 clipboards, including one with writing shield
   - pens/pencils
   - stopwatch
   - numbered questionnaire packets
   - packet of study description/consent forms
   - an empty file folder labeled “refused”
(Remember, forms must be numbered with the same participant number that is on the folder. Make sure all forms that you give out have participant numbers, and that you have recorded your initials and the date in the appropriate places.)

2. Review any comments made by the last RA to collect data (if applicable) on the Data Collection Log, and note the number of participants for whom data have been collected in the to date.

Collecting Data

3. When you arrive at the health clinic, introduce yourself to the reception area staff (if necessary) and remind them that you are an RA for the screening study and will be asking students to complete some questionnaires while they wait to see a provider.

4. Station yourself in the waiting room. After a student registers at the front desk, take a study description/consent form from the folder, approach her and say, "Hi, I'm [your first name]. We are conducting a research study at the clinic that involves answering some questionnaires before you see the doctor or nurse. This tells more about it—would you please read this description of the study over and decide if you'd be willing to participate?"

2. If the student refuses to read the form, or reads the form and declines to participate, thank her, take the consent form back, initial and date it, and put it in the "refused" file. If the student offers a reason for declining, write that on the front of the form (e.g., if she says, "I feel too sick right now to do this," you can write, "too sick" on the form).
3. If the student agrees to participate, open the packet on top, noting whether the participant will be in the “Report or “No report” condition, and take out the first three pages (Screening Log, Participant Information Form and SCID-S). Put the Screening Log on your clipboard. Put the other two forms on the shielded clipboard and hand it to the participant to complete.

4. Observe the length of time it takes the participant to complete the SCID-S and use the stopwatch to record start and end times for completion on the Screening Log, along with any problems that occur. Position yourself to monitor this without compromising her privacy. She should be using the shielded clipboard as a writing platform. If she fails to complete this item for any reason, write a description of the circumstances on the Screening Log form and write “incomplete” on the front of the packet envelope.

5. If a participant in a “Report” condition asks, after reading the SCID-S instructions (or in any way referring to the SCID-S): “Will this be given to the provider [doctor/nurse]?" You can answer, “You should assume it might be before you answer it.” Be sure to note this on the Screening Log. (If the participant is in the “No-Report” condition and asks this, you should say, “No, it’s completely confidential and for research purposes only.”) Of course, any participants who ask the same question about their TLEQ or DEQ or any of the other materials should be assured that their responses are confidential. (Be certain that you are not overheard by other patients who may soon also be participants!)

6. When the participant has completed the SCID-S, give her the packet envelope and ask her to put it inside. Then take back the envelope from her and give her the
TLEQ to complete. Again, record start and end times for completion of the TLEQ without viewing the participant’s responses (she should be using the shielded clipboard as a writing platform). When she indicates she has completed the TLEQ, don’t take it back from her, but give her the DEQ to complete as well (You are giving these to her separately so that you can time the completion of the TLEQ accurately). If the participant fails to complete the TLEQ for any reason, write a description of the circumstances on the Screening Log and write “incomplete” on the front of the packet envelope. If she completes the TLEQ but not the DEQ, write “DEQ not completed” on the front of the packet envelope.

7. When the participant has completed the TLEQ and DEQ, ask her to put both of them into the envelope, then take back the envelope and give her the Feedback Form to complete. If she fails to complete the Feedback Form, record a brief explanation on the form itself and return it to the packet. When she completes the Feedback Form, you will take it from her rather than asking her to put it in the envelope, so that you can quickly glance at Item 12 (last item on last page) and see if she has indicated that she would like a referral. If the participant has indicated she would like a referral, point out the resource list when you give her the debriefing packet, and say quietly: “You asked about a referral. This is an updated list of some very good referrals in the community. If you’d like more information about referrals, you can also phone the research director with your questions” (and indicate the PI numbers on the consent form). Then proceed with the debriefing, as described below.
8. Remember that you will be discreetly monitoring the participant at all times for signs of distress as she completes the materials. In the unlikely event that a participant does become upset while filling out the questionnaires, quietly remind her that she need not complete the questionnaires if they are upsetting to her. Say (very quietly so that you are not overheard by others who might be nearby), "The student counseling center is here on campus. If you would like to talk to a counselor, you can call them or go there now." Give her the debriefing materials, and point out the other emergency numbers in the packet. If the participant still appears to be upset, please page me immediately at 389-2727. Record the occurrence on the Screening Log.

9. Whether the participant completes all of the forms, or does not complete the questionnaires, for whatever reason, be sure that she receives the debriefing/resources handouts. Say, "Here are some debriefing materials that we give participants when they've completed the study. There's a handout that explains in detail what the purpose of our study is, and also some information about trauma and traumatic life events, and some community resources and referrals for people who've experienced a traumatic event. It's yours to take with you with our thanks for your contribution to this research Can I answer any questions for you, now that you have completed the study?" Answer all questions you can. If you are uncertain about anything, refer the participant to the PI numbers on the consent form. If a participant reports feeling upset or distressed as a result of the study, show them the number for the student counseling center in their debriefing packet and say, "The student counseling center is here on campus. If
you would like to talk to a professional counselor about this, you could call them now.” Also show them the other emergency numbers in the packet. If the participant still appears to be upset, please page me immediately at 389-2727. Record the occurrence on the Screening Log.

10. If participant was in the “Report” condition, and no other patients are within hearing range, you will also say: “Note in the debriefing form that none of the material you completed is actually given to a provider. Some participants are told that it will be as part of the research design. The debriefing form explains that more fully. Do you have any questions about that?” If other patients ARE within hearing distance, do not say this out loud! Instead, point out the line in the debriefing form that explains the “deception” and simply say, “If you read this, it will explain more fully. Do you have any questions about that?” In the unlikely event that the patient says she wants the information to be given to a provider, you should say, “I’m sorry, but we must keep all of the information you provided us confidential and anonymous. But there is no reason why you cannot tell this to the provider yourself, if you wish to do so. Or, you could go over to the student counseling center and talk about it with someone there.”

Be sure you are not overheard when you say this! Take the participant to a private spot or outside if you need to before discussing this.

11. At all times when interacting with participants, protecting their privacy should be a topmost priority. With the exception of Item 12 on the Feedback Form that asks about wanting a referral, do not look at their responses to any of the materials. Position yourself close enough to respond if the participant asks a question, and to
time the questionnaire completions, but far enough away so that it is clear to them that you cannot see their responses. Be quiet and discreet in all verbal interactions, particularly if there are other patients nearby. If the room is crowded, try to find a place for the participant that is protected.

12. Protecting the integrity of the study is also a priority, so also be certain that any conversations that have to do with “Report” and “No report” issues are not overheard.

Finishing up.

13. Be certain that your initials and the date are on all completed packets. (If you’ve dated and initialed some packets that you didn’t use, erase or cross out the dates and initials so that the next RA can use them.).

On the Data Collection Log, record your initials, the date, the hours you collected data (e.g., “1 pm to 4:30 pm”), number of completed packets collected, number of refusals, any unusual events that occurred, any noteworthy comments or observations about the study by a participant, and/or your observations or comments about conditions at the clinic that day. In the “comments” section, also record any occurrences of participant distress, and how the problem was resolved. Return all data and other materials to [the designated place].
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Clinical Utility of a Brief Screening Question

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Clinical Utility of a Brief Screening Question

*Psychiatry, 22, 261-269.*


