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The Development of a Clinician-Administered PTSD Scale

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Several interviews are available for assessing PTSD. These interviews vary in merit when compared on stringent psychometric and utility standards. Of all the interviews, the Clinician-Administered PTSD Scale (CAPS-1) appears to satisfy these standards most uniformly. The CAPS-1 is a structured interview for assessing core and associated symptoms of PTSD. It assesses the frequency and intensity of each symptom using standard prompt questions and explicit, behaviorally-anchored rating scales. The CAPS-1 yields both continuous and dichotomous scores for current and lifetime PTSD symptoms. Intended for use by experienced clinicians, it also can be administered by appropriately trained paraprofessionals. Data from a large scale psychometric study of the CAPS-1 have provided impressive evidence of its reliability and validity as a PTSD interview.

KEY WORDS: diagnosis; post-traumatic stress disorder; reliability; structured interviews; validity.

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INTRODUCTION

Structured diagnostic interviews play an increasingly important role in contemporary mental health research and practice. Such interviews enable clinicians and clinical investigators to obtain uniform information in the context of an idiographic, interpersonal exchange. They also provide a wealth of meaningful clinical information and can lay the foundation for therapeutic change. The evolving prominence of diagnostic interviews parallels the development and widespread adoption of formal diagnostic nomenclature (e.g., American Psychiatric Association, 1987; for a history of diagnostic interviews see Robins *et al.*, 1983).

A number of structured interviews are now available for diagnosing post-traumatic stress disorder (PTSD). These include stand-alone interviews such as the Structured Interview for PTSD (SI-PTSD; Davidson, Kudler, & Smith, 1990; Davidson, Smith, & Kudler, 1989), the PTSD Interview (PTSD-I; Watson, Juba, Manifold, Kucala, & Anderson, 1991), the PTSD Symptom Scale — Interview (PSS-I; Foa, Riggs, Dancu, & Rothbaum, 1993), and the Clinician-Administered PTSD Scale — Version 1 (CAPS-1; Blake *et al.*, 1990; Blake *et al.*, 1992),[5] as well as PTSD modules of comprehensive diagnostic interviews such as the Diagnostic Interview Schedule (DIS; Helzer, Robins, & McEvoy, 1987; Robins, Helzer, Croughan, Williams, & Spitzer, 1981a, 1981b), the Structured Clinical Interview for DSM-III-R (SCID; Spitzer & Williams, 1985; Spitzer, Williams, Gibbon, & First, 1990), and the Anxiety Disorders Interview Schedule — Revised (ADIS-R; DiNardo & Barlow, 1988).

Recently, Watson and colleagues (Watson, 1990; Watson *et al.*, 1991) outlined four standards for evaluating PTSD measures. They propose that an adequate measure should: (a) correspond with current diagnostic criteria (e.g., DSM-III-R; APA, 1987), (b) provide both dichotomous and continuous data about each symptom and about the disorder, (c) be usable by trained paraprofessionals, and (d) possess adequate reliability and validity. These are important standards. Correspondence with the current diagnostic criteria promotes across-site generalization and enhances external validity in research. Dichotomous and continuous data offer the greatest return on the diagnostic assessment by providing data about diagnostic threshold as well as gradations of symptom and disorder severity. The use of paraprofessionals as interviewers is an efficient and economical alternative to the use of busy and costly clinicians. And, most fundamentally, a structured interview for PTSD must be reliable (i.e., yielding equivalent scores over different raters or occasions) and valid (i.e., distinguishing between individuals with and without the disorder).

[5]Another interview, the Stress Response Rating Scale (Weiss, Horowitz, & Wilner, 1984) was developed to assess intrusion, denial/avoidance, and general distress responses to stressors, and is consequently not reviewed here along with the PTSD diagnostic interviews.

Three additional standards can be applied when evaluating the relative merits of diagnostic interviews. First, the interview should provide clear, concise questions and should include explicit behavioral anchors for rating each PTSD symptom. This practice promotes standardization across administrations, thus reducing rating bias and enhancing reliability. Without explicit anchors on the rating continua, bias may be introduced by well-meaning raters who employ arbitrary and widely varying verbal queries to determine the presence and severity of particular symptoms. Second, diagnostic interviews should treat symptom severity as a multidimensional construct. Symptom severity can be broken down into at least two basic but important components, frequency and intensity. These components may be critical to understanding both the current symptom picture as well as any changes in symptoms that may occur over time. Finally, the interview should carefully delineate the time frame for which diagnostic status is being assessed. This feature is particularly important when distinguishing between current and lifetime status.

The primary purpose of this report is to familiarize clinicians and clinical investigators with the CAPS-1, which was designed to satisfy all of the standards proposed above. In the next section we outline the development and features of the CAPS-1, and discuss several issues regarding its use. Following that, for purposes of comparison, we present a brief overview of the other PTSD interviews now available and evaluate them according to the proposed standards.

DEVELOPMENT AND FEATURES OF THE CAPS-1

Developed at the National Center for PTSD, the CAPS-1 (Blake *et al.*, 1990) was designed to overcome the limitations of other available PTSD interviews. The CAPS-1 is intended for use by clinicians and clinical researchers who have a working knowledge of PTSD. It assesses the 17 symptoms of PTSD outlined in the DSM-III-R, as well as eight associated symptoms (see Table 1). Five additional items involve: (a) the impact of symptoms on social and occupational functioning, (b) improvement in PTSD symptoms since a previous CAPS-1 assessment, (c) overall response validity, and (d) overall PTSD severity.

The frequency and intensity of each symptom are rated on separate 5-point Likert scales. Standard prompt questions, suggested follow-up questions, and behaviorally anchored rating options are provided for each item.

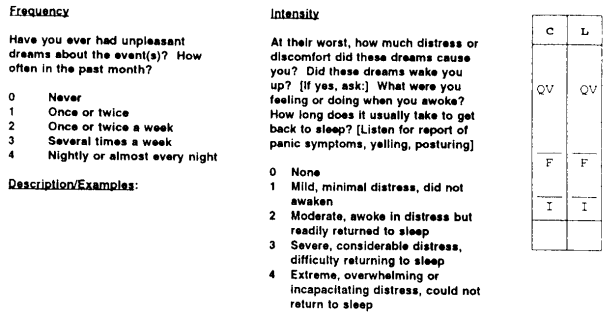
Table 1. Caps-1 Items

1. Recurrent and intrusive trauma recollections	16. Exaggerated startle response
2. Distress when exposed to trauma reminders	17. Physiologic reactivity
3. Acting or feeling as if event were recurring	18. Impact on Social Functioning
4. Recurrent and distressing dreams of event	19. Impact on Occupational Functioning
5. Efforts to avoid thoughts or feelings	20. Global Improvement (since earlier measurement occasion)
6. Efforts to avoid activities or situations	21. Rating Validity
7. Inability to recall trauma or trauma aspects	22. Global Improvement
8. Markedly diminished interest in significant activities	23. Guilt over acts committed or omitted
9. Feelings of detachment or estrangement from others	24. Survivor Guilt
10. Restricted range of affect	25. Homicidality
11. Sense of a foreshortened future	26. Disillusionment with authority
12. Difficulty falling or staying asleep	27. Feelings of hopelessness
13. Irritability or outbursts of anger	28. Memory Impairment
14. Difficulty concentrating	29. Sadness and depression
15. Hypervigilance	30. Feelings of being overwhelmed

Current status for all symptoms is assessed first, and, if current PTSD criteria are not met, the entire set of questions is asked again in regard to an earlier, "worst ever" 1-month period since the trauma. The CAPS-1 rating scheme yields dichotomous and continuous data for individual symptoms and for the disorder, thus providing information about the presence or absence of PTSD, as well as the overall severity of symptomatology.

The division of symptom severity into the separate dimensions of frequency and intensity allows for an idiographic, fine-grained analysis of symptom severity. For example, one patient may experience relatively infrequent but very intense PTSD symptoms, whereas another may experience very frequent but only moderately intense symptoms. This feature may prove to be helpful in identifying potential treatment-patient matching variables. It also may be valuable for outcome and follow-up studies, in which the frequency or the intensity of symptoms might show differential change over time or as a function of treatment.

The CAPS-1 provides standard prompt questions regarding both the frequency and the intensity of individual symptoms. An example of a CAPS-1 item is shown in Fig. 1. The interviewer follows these standard questions, clarifying or rephrasing as needed. Guidelines for follow-up questioning are outlined in an accompanying CAPS Instruction Manual. The interviewer codes the ratings of frequency and intensity for both current and lifetime assessments in columns to the right of each item, and


Frequency

Have you ever had unpleasant dreams about the event(s)? How often in the past month?

0 Never
1 Once or twice
2 Once or twice a week
3 Several times a week
4 Nightly or almost every night

Description/Examples:

Intensity

At their worst, how much distress or discomfort did these dreams cause you? Did these dreams wake you up? [If yes, ask:] What were you feeling or doing when you awoke? How long does it usually take to get back to sleep? [Listen for report of panic symptoms, yelling, posturing]

0 None
1 Mild, minimal distress, did not awaken
2 Moderate, awoke in distress but readily returned to sleep
3 Severe, considerable distress, difficulty returning to sleep
4 Extreme, overwhelming or incapacitating distress, could not return to sleep

C	L
QV	QV
F	F
I	I

Fig. 1. CAPS-1 item assessing frequency and intensity of recurrent distressing dreams of the traumatic event(s).

can also code *"QV,"* for *"Questionable Validity,"* when reason exists for doubting the veracity of patient report (e.g., due to poor comprehension or expression skills, malingering, etc.).

When using the CAPS-1, care is taken to clearly distinguish between similar or related PTSD symptoms. For example, the wording of the item measuring *"recurrent and intrusive distressing recollections of the event"* distinguishes it from the item measuring *"intense psychological distress at exposure to events that symbolize or resemble an aspect of the traumatic event,"* reflecting a possible discrimination between cued and uncued distress. A similar clarification was made in order to distinguish intrusive recollections experienced while awake from those occurring during trauma-related nightmares.

Another key feature of the CAPS-1 is that it contains explicit anchors and behavioral referents on which to base all ratings. This feature provides an explicit guide for the interviewer and was intended to increase reliability. Also, the CAPS-1 can be administered by paraprofessionals. However, these paraprofessionals should: (a) have experience in diagnostic interviewing; (b) be very familiar with PTSD and associated symptoms; and (c) undergo thorough training in the CAPS-1, including observation of actual interviews by an experienced clinician and role-playing of practice interviews.

In developing the CAPS-1, careful attention was paid to the assessment of lifetime PTSD. The interview is explicitly structured to establish

that, if endorsed symptoms occurred at some point in the past, they all occurred within the same one-month time frame. Other PTSD interviews typically assess current and lifetime (*"worst-ever"*) symptomatology on a symptom-by-symptom basis, which can lead to some confusion about lifetime diagnostic status. For example, when questioned about lifetime status for the first symptom, a patient may identify an earlier 1-month period in which that symptom was the most severe. However, the most severe month for subsequent symptoms may not be the same month as that for the first symptom. For example, the most severe month of sleep problems may not coincide with the most severe month of emotional numbing. Using this method, it can become increasingly difficult after a few symptoms to maintain a common 1-month reference point.

In contrast, the CAPS-1 convention is to assess current PTSD first. If current PTSD criteria are not met, the interviewer asks a series of questions to identify the worst month, in terms of PTSD symptomatology, since the trauma. The interviewer begins, *"Has there been a period since the trauma in which the problems I've just asked you about were more of a problem to you than they were in the past month?"* The interviewer then asks follow-up questions to determine whether the symptoms lasted at least 1 month, and if so, when this 1-month period occurred. In the event of multiple time periods, the month when symptoms were at their worst (greatest severity) is identified. With this month as the new referent time period, the interviewer repeats the frequency and intensity questions for each PTSD symptom. The presence or absence of a symptom is established by considering the ratings on both the frequency and intensity dimensions. We have employed two rationally derived conventions to use in considering symptom endorsement. First, a symptom can be considered endorsed when the frequency dimension is rated as a "1" or greater (indicating that it occurred at least once during the 1-month period) and the intensity dimension is rated as a "2" or greater (indicating that the symptom is at least moderately intense or distressing). A more conservative strategy is to consider endorsement only if the sum of frequency and intensity rating total to four or more.

Recently, Weathers (1993) demonstrated that both of these rationally derived decision rules may overestimate PTSD symptomatology. He asked 25 doctoral-level clinicians, all of whom were experienced with PTSD and with the CAPS-1, to rate every frequency-intensity combination for each CAPS-1 item as: (a) symptom absent; (b) subthreshold; or (c) symptom present. Findings revealed that this approach produced frequency-intensity combinations that generally were more stringent than either the "1-2" rule or the "≥4" rule. These findings regarding threshold for symptom endorsement are available upon request.

The CAPS-1 appears to have excellent psychometric properties. In a pilot study involving five PTSD and two non-PTSD-combat veterans, Blake *et al.* (1990) reported perfect diagnostic agreement between two clinicians who made simultaneous ratings of PTSD using the CAPS-1. Weathers *et al.* (1991; 1992a; 1992b) recently completed a comprehensive evaluation of the psychometric properties of the CAPS-1. In this study, 60 combat veterans were administered the CAPS-1 on two different occasions, 2-3 days apart, by two different clinicians working independently. An additional 63 veterans were administered a single CAPS-1. All subjects also were administered the SCID PTSD module by a third independent clinician.

Test–retest reliability for three different rater pairs ranged from .77 to .96 for the three symptom clusters, and .90 to .98 for all 17 items. Internal consistency (alpha coefficients) for the severity scores (frequency + intensity) for each of three symptom clusters ranged from .85 to .87, and internal consistency for all 17 items was .94. Against a SCID PTSD diagnosis, a CAPS-1 total score of 65 was found to have good sensitivity (.84), excellent specificity (.95), and a kappa coefficient of .78. Regarding convergent validity, the CAPS-1 total severity score correlated strongly with other indices of PTSD, including the Mississippi Scale for Combat-related PTSD (Keane, Caddell, & Taylor, 1988; $r = .91$), and the PK scale of the MMPI (Keane, Malloy, & Fairbank, 1984; $r = .77$).

An alternate version of the CAPS-1, called the CAPS-2, is also available. The CAPS-2 is designed for assessing current symptom status, and ratings are made over a one-week, rather than a one-month, time period. The CAPS-2 is particularly valuable for repeated assessments over relatively brief sampling intervals, and can be useful in evaluating treatment outcome (e.g., Nagy, Morgan, Southwick, & Charney, 1993).

REVIEW OF OTHER AVAILABLE PTSD INTERVIEWS

In this section we briefly describe other structured interviews for assessing PTSD. This section is intended to provide a context and a basis of comparison for the CAPS-1, and to orient interested clinicians and clinical investigators to the various assessment options now available.

The Diagnostic Interview Schedule (DIS)

The DIS is a comprehensive psychiatric interview developed by researchers at Washington University and the National Institute of Mental Health (NIMH) for use by lay interviewers conducting epidemiological re-

search. Versions of the DIS PTSD module have been employed in several epidemiological studies of PTSD, including the Epidemiological Catchment Area survey (ECA; Helzer, Robins, & McEvoy, 1987), the Vietnam Experience Study (VES; Centers for Disease Control, 1988) and the National Vietnam Veterans Readjustment Study (NVVRS; Kulka *et al.*, 1988, 1990). The interview consists of a series of questions with dichotomous (yes/no) scoring options for establishing whether a patient experiences specific symptoms and, ultimately, meets criteria for the full disorders. The DIS provides one standard question for each PTSD symptom, but offers no follow-up questions or rating anchors. The DIS allows for the assessment of both current and lifetime diagnostic status of each psychiatric disorder, including PTSD.

Although variants of the DIS PTSD module have been employed in research, few psychometric data have been published. In the initial validation component of the NVVRS, Kulka *et al.* (1988) found that the DIS had good sensitivity (.87) and fair specificity (.73), and demonstrated reasonable overall agreement with certified clinical diagnosis (kappa = .64). However, these investigators found that the DIS did not perform well when applied to a large community sample. Although it had excellent specificity (.98), its sensitivity was unacceptably low (.22), as was the overall agreement with a criterion diagnosis (kappa = .26).

The original DIS PTSD module (Robins *et al.*, 1981a) meets only three of the seven proposed standards. It parallels diagnostic criteria, it can be administered by paraprofessionals, and it adequately assesses lifetime and current PTSD. Two other standards are met partially: The DIS PTSD module provides clear and concise questions (but not explicit rating descriptors), and it may have adequate validity under certain circumstances (when used with high base rate samples). The DIS, however, does not assess separate dimensions of severity (e.g., frequency and intensity), and it yields only dichotomous data both for individual symptoms and for a diagnosis of PTSD.

The Structured Clinical Interview for DSM-III-R (SCID)

The SCID (Spitzer, Williams, Gibbon, & First, 1990) assesses all of the major psychiatric disorders, but the published version does not include a module for assessing PTSD. However, a PTSD module was developed in a joint effort by the authors of the SCID (Spitzer & Williams, 1985) and the researchers involved in the NVVRS (Kulka *et al.*, 1990). The SCID PTSD module consists of 17 items corresponding to the DSM-III-R criteria for the disorder, plus two items pertaining to guilt. Standard questions are

provided for each symptom, and symptoms are rated as *absent, subthreshold,* or *present.* For each symptom, the interviewer sequentially rates lifetime symptom status (worst month ever), followed by current status (in the past month) before moving on to the next symptom.

The SCID PTSD module appears to have adequate reliability. In the NVVRS (Kulka *et al.*, 1990), raters listening to audiotaped interviews showed strong agreement with the ratings made by the clinician who conducted the interview (kappa = .93). McFall, Smith, Roszell, Tarver, and Malas (1990) interviewed 10 veterans twice using the SCID PTSD module and reported 100% interrater agreement. Keane, Kolb, and Thomas (1990) reported a kappa of .68 based on two independent interviews of 37 Vietnam combat veterans. More recently, Schnurr, Friedman, and Rosenberg (1993) obtained 100% interrater agreement in SCID PTSD interviews of six full and six subthreshold PTSD Vietnam veterans. The SCID PTSD module also appears to be a valid measure of the disorder. In the NVVRS it corresponded strongly with other measures of PTSD, including the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979), the Mississippi Scale, and the MMPI PK scale, and with a composite PTSD diagnosis.

In summary, the SCID PTSD module corresponds to current diagnostic criteria, and it has adequate reliability and validity. However, it lacks explicit rating descriptors, it yields primarily dichotomous information, it does not assess separate dimensions of severity, and the SCID developers strongly suggest that it be used only by experienced professionals or highly trained and clinically sophisticated paraprofessionals (cf. Spitzer, Williams, Gibbon, & First, 1990). Also, the method of assessing lifetime symptom status may lead to false positives in determining lifetime diagnostic status because individual symptoms may have been present at *some* time in the past, but not necessarily at the *same* time.

The Anxiety Disorders Interview—Revised (ADIS-R)

The ADIS-R (DiNardo & Barlow, 1988) is a comprehensive interview developed to assess the spectrum of anxiety disorders. The PTSD component of the ADIS-R consists of 17 dichotomous items corresponding to the DSM-III-R criteria for the disorder. Standard prompt questions are offered for assessing each symptom cluster, although separate prompts are not provided for individual symptoms. As with the SCID, lifetime and current PTSD are inquired sequentially on a symptom-by-symptom basis. Blanchard, Gerardi, Kolb, and Barlow (1986) found diagnostic agreement between the ADIS and a clinical diagnosis of PTSD in 40 of 43 (93%)

cases (kappa = .86), and in only one case was there a *full* diagnostic disagreement.

The ADIS-R PTSD module appears to satisfy three of the proposed interview standards. It corresponds to established diagnostic criteria, it can be administered by paraprofessionals, and it appears to be a valid measure of PTSD. On the other hand, it does not include standard prompt questions or explicit rating options for assessing individual symptoms, it does not yield continuous data, and it does not adequately assess lifetime PTSD. Furthermore, the ADIS relies on a global rather than multidimensional assessment of severity.

The Structured Interview for PTSD (SI-PTSD)

The SI-PTSD (Davidson *et al.*, 1989) contains 13 items based on DSM-III criteria (American Psychiatric Association, 1980), each rated on 5-point Likert scales (from 0 = *absent* to 4 = *extremely severe*). The SI-PTSD yields both dichotomous and continuous data about PTSD status. Current PTSD status and *worst ever* (i.e., lifetime) symptom status are measured in a symptom-by-symptom fashion. A more recent version of the SI-PTSD assessing the 17 symptoms of DSM-III-R PTSD (American Psychiatric Association, 1987) also has been developed (Davidson *et al.*, 1990). However, no published data on the newer interview are available at this time.

The SI-PTSD authors report sound psychometric properties for the interview, including good test–retest reliability (.71), high internal consistency (alpha = .94) and excellent interrater reliability (intraclass correlations from .97–.99, and 100% overall diagnostic agreement). Using a SCID PTSD diagnosis (obtained on the same day) as the criterion, both the sensitivity and specificity of the SI-PTSD were high (.96 and .80, respectively), and the overall kappa coefficient was .79. The interview was also found to have strong concordance with the IES (Horowitz *et al.*, 1979), and the Hamilton scales for depression (Hamilton, 1967), and anxiety (Hamilton, 1959) (r = .61, r = .57, and r = .52, respectively). Each of these instruments either measure PTSD or PTSD-related symptomatology.

The SI-PTSD satisfies four of the proposed standards: It adheres to established diagnostic criteria, it provides dichotomous and continuous data for each symptom and the full disorder, it can be used by trained sub-professionals, and it possesses good reliability and validity. However, it does not provide behaviorally-anchored rating descriptors, it treats severity as a single dimension, and the *"worst ever"* convention may tend to inflate lifetime prevalence rates. Validity and reliability data on the more recent and

promising SI-PTSD will provide important new information on which to evaluate its merits.

The PTSD Interview (PTSD-I)

In the PTSD-I (Watson *et al.*, 1991), the interviewer inquires about each of the 17 DSM-III-R PTSD symptoms, asking the patient to provide severity ratings on a 7-point Likert scale (from 1 = *No/Never* to 7 = *Extremely/Always*). In this way, the PTSD-I provides both dichotomous and continuous data for individual symptoms and for the full disorder. Two follow-up questions ask whether the symptoms, considered collectively, were present for at least one month at some point since the trauma (i.e., lifetime PTSD), and whether the symptoms are present currently. The PTSD-I has manifested high internal consistency (alpha = .92) and excellent test–retest reliability (r = .95). Using the DIS as a criterion measure, the interview demonstrated excellent sensitivity (.89), specificity (.94), and overall agreement (kappa = .82).

As Watson (1990) points out, the PTSD-I satisfies a number of the standards listed above. It corresponds to established diagnostic criteria, it yields both dichotomous and continuous data about each symptom and about the disorder, and it appears to possess adequate reliability and validity. In addition, since symptom severity ratings are made by the patient, and clinical judgment is not required, the PTSD-I can be administered by paraprofessionals. However, the PTSD-I does not assess frequency and intensity separately, nor does it adequately assess lifetime PTSD symptom status. Also, it does not provide follow-up questions or detailed rating descriptors, and the reliance on the patient's ratings makes the PTSD-I less like an interview and more like a self-report measure.

PTSD Symptom Scale — Interview (PSS-I)

The PSS-I (Foa *et al.*, 1993), is a 17-item interview that can be administered by trained paraprofessionals. Each DSM-III-R symptom is rated using a single question per item. The severity of each symptom over the past two weeks is rated on a 4-point Likert scale (from 0 = *not at all* to 3 = *very much*). Lifetime PTSD is not assessed. Analysis of PSS-I findings from 118 female sexual and non-sexual assault victims revealed that the interview showed strong internal consistency (alpha = .85), good test–retest reliability (.80), excellent interrater reliability (.97) and high overall diagnostic agreement (kappa = .91). The findings also revealed strong correlations between the PSS-I and the IES, the Rape Aftermath Symptom Test

(Kilpatrick, 1988), the Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961) and the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970).

The PSS-I fully satisfies three of the proposed standards for diagnostic interviews. It yields both continuous and dichotomous data for individual symptoms and for the disorder, it possesses adequate levels of reliability and validity, and it can be administered by trained paraprofessionals. However, the 2-week time frame does not address the DSM-III-R criterion (E) that symptoms must be present for at least one month in order to diagnose PTSD. A standard question is provided for each symptom, but no additional prompts are given, and the descriptors accompanying each rating option lack explicit behavioral referents. Finally, the PSS-I does not dimensionalize severity (indeed, some items tend to measure symptom frequency, while others measure intensity) and does not specifically assess lifetime PTSD.

DISCUSSION

A number of structured interviews are now available for assessing PTSD. These interviews vary widely in their relative merits when evaluated according to the standards proposed by Watson (1990) and outlined in the present paper. It is apparent from the summary provided in Table 2 that all of these instruments have one or more limitations, although each may be useful for a specific assessment need. Our intent in developing the CAPS-1 was to address the limitations inherent in other available instruments, and our experience with it has convinced us of its value: The CAPS-1 satisfies or partially satisfies all seven of the proposed interview standards.

However, the CAPS-1 is not without shortcomings. In hundreds of CAPS-1's we have conducted, we have become aware that it can take an average of 45 min or more. At sites with limited clinical resources, a briefer interview or even a self-report instrument may be preferred. Similarly, the frequency-intensity scheme for each item introduces a new level of complexity in diagnosis. Aside from our own rationally derived scoring rules, empirically determined rules are needed for the precise determination of symptom endorsement (see Weathers, 1993). Also, while the CAPS-1 was developed as a generic measure of PTSD symptoms it is likely that its psychometric qualities (factor structure, internal consistency, mean values by item, etc.) may differ by trauma population. Similarly, the associated symptoms, which we have found to be pertinent for combat veterans, may not be as salient for other traumatized populations.

In addition, the CAPS-1 was designed only to measure PTSD symptoms, and does not assess Criterion A, the presence of a recognizable, trau-

Table 2. Adherence of PTSD Interviews to Proposed Standards[a]

Standard	Measure							
	DIS	SCID	ADIS-R	SI-PTSD (1989)	SI-PTSD (1990)	PTSD-I	PSS-I	CAPS-1
1. Corresponds to established diagnostic criteria	*A*	*A*	*A*	*B*	*A*	*A*	*B*	*A*
2. Provides dichotomous and continuous data about symptoms and disorder	*C*	*B*	*C*	*A*	*A*	*A*	*A*	*A*
3. Can be administered by trained paraprofessionals	*A*	*B*	*A*	*B*	*B*	*A*	*A*	*B*
4. Possesses adequate reliability and validity	*B*	*A*	*A*	*A*	?	*A*	*A*	*A*
5. Provides clear and concise questions and includes behaviorally anchored rating descriptions	*B*	*B*	*B*	*B*	*B*	*B*	*B*	*A*
6. Assumes a multidimensional view of severity	*C*	*C*	*C*	*C*	*C*	*C*	*C*	*A*
7. Carefully delineates current and lifetime diagnostic time frames	*B*	*B*	*B*	*B*	*B*	*B*	*C*	*A*

[a]*A* = fully satisfies standard, *B* = partially satisfies standard, *C* = does not satisfy standard.

matic stressor. Both the DIS and the SCID provide questions for assessing the nature and extent of an identified traumatic event or range of events (e.g., those that collectively occurred during a combat tour). Questions about symptoms can then be tied to a "precipitating event." This convention has notable merit, especially for scientific purposes, in that the symptoms being assessed can be tied to particular events and etiology can be inferred. Unfortunately, when an individual reports a multiple or complex trauma history (e.g., an adult earthquake survivor who also had survived a catastrophic automobile accident during childhood), symptoms are often intertwined and overlap so much that their delineation is impossible and/or misleading (e.g., dream content may be wrongly linked to another event). To avoid these problems, the CAPS-1 convention allows the interviewer to conduct a thorough trauma event assessment, ask the event-linked symptom questions (i.e., the four Criterion B symptoms, and symptoms involving avoidance of thoughts, feelings, activities, and situations reminiscent of the trauma, psychogenic amnesia for the trauma event, physiologic reactivity to trauma reminders) for the event determined to be most salient or currently problematic, and then ask follow-up questions to include symptoms related to all other identified traumas.

The CAPS-1 is likely to undergo revision as time passes. Prompt questions may be revised or introduced to further aid in accurate assessment. With the recent publication of the fourth edition of the Diagnostic and Statistical Manual (DSM-IV), some modifications inevitably will be made. As has been the case with some of the older PTSD interviews (DIS, SCID, SI-PTSD), it is reasonable to expect that the content of the CAPS-1 will be modified to match any change in diagnostic criteria. Inspection of the proposed changes indicates that they should not affect the fundamental structure of the CAPS-1, nor should they reduce its psychometric integrity.

All things considered, the CAPS-1 has met or exceeded our expectation as a PTSD interview. Its features are unique and aim for the highest psychometric standards. Preliminary studies indicate that the CAPS-1 possesses excellent internal consistency, and high convergent and discriminant validity. The findings also indicate excellent utility with high specificity and sensitivity. Although these data strongly support the use of the CAPS-1 as a reliable and valid PTSD interview, more research on its use in clinical trials is needed.

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The Civilian Version of the Mississippi PTSD Scale: A Psychometric Evaluation

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This three-part study examined the reliability and validity of the civilian version of the Mississippi Scale for Combat-Related PTSD using data from the nonveteran participants in the National Vietnam Veterans Readjustment Study. The Civilian Mississippi Scale had a raw score distribution that was roughly symmetric, with an acceptable degree of dispersion and a reasonably high internal consistency reliability coefficient. Overall, however, measurement precision was weaker than that for the military version of the instrument, and confirmatory factor analytic findings differed from those found for the military version. Preliminary investigations of validity were in the form of correlations with indices of stressful life events, a PTSD symptom count, and measures of demoralization and active expression of hostility. The Civilian Mississippi Scale emerged from the various analyses as a PTSD measure with potential but requiring further validational study and perhaps some refinement.

KEY WORDS: PTSD; assessment; Mississippi Scale; reliability; validity.

INTRODUCTION

The vast majority of research on post-traumatic stress disorder (PTSD) has focused on combat veterans. Likewise, many of the currently available PTSD assessment and diagnostic devices derive from research on veteran samples. For example, the PK-Scale (Keane, Malloy, & Fairbank, 1984), an empirically selected set of 49 items from the MMPI, has a substantial record as a self-report indicator of PTSD among samples of Vietnam combat veterans. Also, the Clinician Administered PTSD Scale

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