

# Guidelines for Differential Diagnoses in a Population With Posttraumatic Stress Disorder

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In a large posttraumatic stress disorder (PTSD) and depression treatment outcome study, thorough diagnostic assessments of veterans at pretreatment, posttreatment, and 3 follow-up times were completed. The research team that reviewed these assessments encountered several challenges in the differential diagnosis of PTSD because of high comorbidity and symptoms shared with or resembling other disorders. For example, how do mental health professionals distinguish symptoms of agoraphobia from avoidance and hypervigilance symptoms of PTSD? When are hallucinations symptomatic of PTSD (e.g., flashbacks) versus a nonpsychotic near-death experience or an independent psychotic disorder? How do mental health professionals differentiate overlapping symptoms of PTSD and depressive disorders? To help make reliable diagnoses, the team developed clarifying questions and diagnostic guidelines, which may prove useful to other clinicians and researchers working with PTSD populations.

*Keywords:* trauma, posttraumatic stress disorder, assessment, differential diagnosis, comorbidity

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The differential diagnosis of mental disorders is often challenging, but it may be especially difficult for the diagnosis of post-traumatic stress disorder (PTSD). A major reason is the high comorbidity between PTSD—especially the chronic type—and other psychiatric diagnoses, which complicates the diagnostic process. Previous research has found that at least 83% of individuals in the general population with PTSD have one or more other psychiatric diagnoses: 16% have one additional diagnosis, 17% have two, and 50% have three or more (Brady, 1997; Solomon & Davidson, 1997). Among Vietnam theater veterans with PTSD, the most common comorbid diagnoses are mood, substance use, and other anxiety disorders (e.g., Kulka et al., 1990; Orsillo et al., 1996; Roszell, McFall, & Malas, 1991). Studies documenting significant comorbidities with PTSD have utilized different assessment methods (e.g., interviews, structured clinician-administered instruments) that have led to variability in the documented prevalence rates of comorbidity. What is not known from the methodology in the studies is the decision-making process that ensued in determining how overlapping symptoms in the comorbid conditions were allocated to one or more of the disorders.

A related diagnostic challenge is that many PTSD symptoms are shared with other psychiatric disorders or may be mistaken for indicators of other disorders. For example, PTSD flashbacks may initially appear to be hallucinations from a primary psychotic disorder if the clinician does not carefully assess the specific quality and content of the perceptual symptoms. Other PTSD symptoms—such as psychological or physiological distress with exposure to cues and avoidance of certain activities, places, or people—may resemble a specific phobia. Some of the numbing and arousal symptoms of PTSD overlap with those of depression, including loss of interest, feelings of estrangement from others, restricted range of affect, insomnia, difficulty concentrating, and guilt. The studies cited earlier for comorbid diagnoses have not explicitly addressed this issue of shared symptoms.

During a large treatment outcome study of veterans with combat-related PTSD and depressive disorders (Dunn et al., 2007), we used structured clinical interviews to make thorough assessments of Axis I and II disorders from the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994). Assessments were made at pretreatment, posttreatment, and three follow-up times. Several diagnostic questions recurred frequently throughout the study: (a) How do mental health professionals distinguish symptoms of agoraphobia from avoidance and hypervigilance symptoms of PTSD? (b) Are symptoms that appear to be due to specific phobias actually avoidance symptoms of PTSD? (c) When are hallucinations symptomatic of PTSD (e.g., flashbacks) versus a nonpsychotic near-death experience or an independent psychotic disorder? (d) How do we differentiate overlapping symptoms of PTSD and depressive disorders? (e) When are symptoms of *DSM-IV* personality disorders better understood as chronic PTSD symptoms?

Every researcher and clinician working with individuals with PTSD must confront these diagnostic questions, because no validated objective criteria independent of clinical symptoms (e.g., laboratory abnormalities) currently exist to distinguish PTSD from these frequent comorbid disorders (Friedman & Yehuda, 1995). Surprisingly little research or specific expert guidance has addressed these differential diagnostic points at the symptom level. Keane, Taylor, and Penk (1997) analyzed clinicians' perceptions

of how typical various symptoms were for PTSD versus major depressive disorder and generalized anxiety disorder; however, their study did not involve the diagnosis of actual patients. A few studies have compared the characteristics of psychotic symptoms in PTSD versus those in independent psychotic disorders, and in some cases structured interviews have been used for the diagnoses (e.g., Hamner et al., 2000). However, these researchers did not discuss how, in initially making their diagnoses, they allocated potentially overlapping individual symptoms, such as hallucinations, to PTSD versus independent psychotic disorders or secondary psychotic disorders. In other words, they did not discuss how they counted the symptom components of the diagnoses before comparing the characteristics. Beyond this handful of studies, the literature contains only a small amount of anecdotal expert clinical opinion (e.g., Blank, 1994).

For the present study of patients with PTSD and depression, we believed it would increase diagnostic reliability to ask these diagnostic questions explicitly and to answer them consistently. To do so, we developed the diagnostic guidelines discussed later, along with examples of their application. Because our population was exclusively made up of combat veterans, our examples reflect combat trauma. However, analogous issues arise with other traumas, so these guidelines should prove useful to researchers and clinicians working with other populations. Additionally, although combat was the target trauma for this study, the veterans also had extensive histories of other traumas prior to and subsequent to military service. In the following sections, specific features of our treatment outcome study that highlight the assessment process are described, followed by the guidelines established by the study team with illustrative examples and the implications of these guidelines for clinical practice.

### Description of the Study

Study participants were 115 male veterans with combat-related PTSD and depressive disorders who were enrolled in a randomized clinical trial comparing the clinical efficacy and cost-effectiveness of self-management therapy (Rehm, 1995) versus psychoeducational group therapy (Dunn et al., 2000). Full details of the study and treatment outcomes have been reported elsewhere (Dunn et al., 2007). Participants were recruited from the PTSD treatment program at the Michael E. DeBakey Veterans Affairs (VA) Medical Center and from two local VA outreach centers. All participants were outpatients at the time of enrollment in the study.

We made thorough assessments of *DSM-IV* Axis I and II disorders at pretreatment, posttreatment, and three follow-up times, using the Structured Clinical Interview for *DSM-IV* Axis I Disorders—Research Version (SCID-I) with psychotic screen (First, Spitzer, Gibbon, & Williams, 1996) and the Structured Clinical Interview for *DSM-IV* Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). We also used the Clinician-Administered PTSD Scale (CAPS-1; Blake et al., 1990) for the PTSD diagnosis. The CAPS-1 also assesses features associated with PTSD (e.g., guilt, dissociation), but these features are not used for determining the diagnosis. The Institutional Review Board of Baylor College of Medicine and the Committee on Human Subjects of the University of Houston approved the study. All participants met *DSM-IV* criteria for PTSD and major depressive or dysthymic disorder. Exclusion

criteria were a score below 24 on the Mini-Mental State Exam (Folstein, Folstein, & McHugh, 1975), a current or past diagnosis of a psychotic or bipolar disorder, or active suicidal ideation and intent. Referring clinicians were explicitly asked not to avoid referring difficult patients. The study did not exclude patients with substance abuse or dependence, although the clinical program's policy was to refer patients with serious current abuse to the substance dependence treatment program first.

The 10 interviewers who conducted the extensive clinician-administered battery of instruments and self-report measures had graduate-level qualifications in clinical psychology or clinical social work. They received 80 hr of assessment training by a licensed clinical psychologist (Nancy Jo Dunn and Jeanne Schillaci) on these assessments. The training included reviewing didactic training tapes on the SCID-I, SCID-II, and CAPS-1; reviewing interviews that had already been completed as part of the study; observing ongoing interviews; conducting interviews under the direction of a senior interviewer; and then independently conducting the interviews.

All assessment interviews were videotaped, and a second interviewer independently scored videotapes to determine interrater reliability and to check for observer drift. The checks were conducted on 20% (23/115) of the baseline interviews, on a smaller percentage of posttest and follow-up interviews (spread evenly across interview points), and on the interviews of ineligible individuals (to verify that the participants were correctly excluded). The reliabilities, measured as percentage agreement (94% to 100%) and Cohen's kappa (Fleiss, 1971), were generally satisfactory for the diagnoses (as measured by CAPS-1 for PTSD and by SCID-I for all other Axis I diagnoses). For the study's qualifying diagnoses, percentage agreement and kappas, respectively, were as follows: PTSD (94%, .64), major depressive disorder (96%, .48), and dysthymic disorder (100%, 1.0). For the personality disorders (as determined by SCID-II), percentage of agreement ranged from 98% to 100%.

The research team (including all study interviewers and clinician investigators) met weekly in a diagnostic conference, chaired by a senior board-certified psychiatrist, to confirm the diagnoses made by study interviewers and to resolve any uncertain diagnoses. All available clinical information (including review of medical records and verification of military service and other available military records) was utilized in resolving any diagnostic uncertainty. The guidelines that are the basis of this article were developed as part of that consensus team meeting.

A total of 281 veterans were assessed for eligibility in the study, and 170 veterans were excluded for not meeting inclusion criteria ( $n = 61$ ), for refusing to participate ( $n = 98$ ), or for other reasons ( $n = 11$ ). Although 111 veterans were randomized to treatment, we have and report diagnostic and baseline clinical data on 115 veterans. The 115 participants had a mean age of 54.8 ( $SD = 7.1$ ) and a mean educational level of 13.9 ( $SD = 2.6$ ) years. Most were Vietnam veterans (91.3%), whereas with the remaining participants served in World War II, the Korean War, or the Persian Gulf War. The exact duration of participants' PTSD symptoms is unknown, but most were being treated for chronic PTSD and experienced their combat-related trauma at an earlier age. The mean age at enlistment was 19.6 ( $SD = 2.2$ ), and the mean length of military service was 4.2 years ( $SD = 4.2$ ). In addition to their combat-related trauma, participants also had experienced consid-

erable premilitary and postmilitary traumas. The following data are for individuals who either directly experienced a trauma and/or witnessed a traumatic event. Of the 110 participants with complete data, the most common premilitary traumas were physical assault (10%), sexual assault (7.3%), other unwanted or uncomfortable sexual experience (6.4%), transportation accidents (6.4%), and fire or explosion (5.5%). The most frequent postmilitary traumas included transportation accidents (41.8%), assault with a weapon (27.3%), sudden and unexpected death of someone close (26.4%), natural disaster (25.5%), serious injury, harm to, or death of someone close (24.5%), physical assault (23.6%), and serious accident at work, home, or during recreational activity (23.6%).

The depressive disorders also tended to be longstanding, although they began somewhat later with a mean age of onset of 28.4 ( $SD = 13.6$ ) as measured by the SCID. The sample had severe PTSD with a mean CAPS-1 score of 74.6 ( $SD = 16.8$ ) and had moderate depression with a mean Hamilton Depression Rating Scale (Hamilton, 1960) score of 22.1 ( $SD = 5.4$ ). Other baseline demographic and clinical characteristics of the sample are shown in Table 1. In this sample, the modal number of current diagnoses was two, and the modal number of lifetime diagnoses was four. The sample appears to have been as psychiatrically impaired as samples in other studies with veteran populations with PTSD (e.g., Keane & Wolfe, 1990; Kulka et al., 1990).

In summary, this chronic PTSD sample had extensive psychiatric comorbidity. In our assessment of the full range of both Axis I and II diagnoses, our team found it useful to elucidate explicitly the decision-making process in making the differential diagnoses. The process was an iterative one, but the same issues arose consistently and are addressed later in the guidelines that we developed. Further, the generally accepted age of psychiatric onset of specific disorders, premilitary trauma history, and premorbid functioning (as available) are potentially differentiating factors and were taken into account in the development of these guidelines where applicable.

## Diagnostic Guidelines

### *1. How Do Mental Health Professionals Distinguish Symptoms of Agoraphobia From Avoidance and Hypervigilance Symptoms of PTSD?*

Avoidance of certain places or situations from which escape might be difficult should not count as a symptom of both agoraphobia and PTSD. Rather, assessment of the reason for the avoidance should determine which disorder better accounts for the avoidance behavior. We counted avoidance as a symptom of PTSD when its rationale was clearly related to the traumatic theme; otherwise, the avoidance was counted toward a diagnosis of agoraphobia.

For example, many veterans reported that they avoided crowds. When asked the reason, however, a veteran might state that being in a crowd in Vietnam was an especially dangerous situation because of the risk of being attacked without warning. In such a case, we considered the avoidance as a symptom of PTSD rather than agoraphobia. Using this guideline, we found that 12.2% ( $n = 14$ ) of the veterans in our study had comorbid panic disorder with agoraphobia, and 1.7% ( $n = 2$ ) had agoraphobia without history of panic disorder. For these participants, these diagnoses were distinct from their PTSD.

Table 1  
*Baseline Demographic and Clinical Characteristics of the Sample (N = 115)*

Characteristic	n	%
Marital status		
Married/remarried	78	67.8
Widowed	2	1.7
Separated/divorced	28	24.3
Never married	7	6.1
Race/ethnicity		
White, non-Hispanic	68	59.1
African American	30	26.1
Hispanic	14	12.2
Other	3	2.6
Employment		
Retired or disabled	76	66.0
Full time	16	14.0
Unemployed	15	13.0
Part time	8	7.0
VA disability compensation <sup>a</sup>		
Medical	59	51.8
Psychiatric	76	66.1
Living arrangement		
With sexual partner and children	42	36.5
With sexual partner alone	41	35.7
With other family	9	7.8
Alone	16	13.9
Other	7	6.1
Current comorbidity: Axis I		
Alcohol abuse or dependence	1	0.9
Drug abuse or dependence	1	0.9
Anxiety disorder (other than PTSD)	46	40.0
Other Axis I disorder	9	7.8
Lifetime comorbidity: Axis I		
Alcohol abuse or dependence	84	73.0
Drug abuse or dependence	37	32.2
Anxiety disorder (other than PTSD)	60	52.2
Other Axis I disorder	12	10.4
Lifetime comorbidity: Axis II		
Cluster A		
Paranoid	20	17.4
Schizoid	3	2.6
Schizotypal	2	1.7
Cluster B		
Antisocial	8	7.0
Borderline	10	8.7
Histrionic	1	0.9
Narcissistic	2	1.7
Cluster C		
Avoidant	14	12.2
Dependent	0	0.0
Obsessive-compulsive	19	16.5
Personality disorder NOS	2	1.7
Axis II: Overall	52	45.2

Note. VA = Veterans Affairs; PTSD = posttraumatic stress disorder; NOS = not otherwise specified.

<sup>a</sup> Some patients were receiving disability compensation for both medical and psychiatric diagnoses.

*Case example:* A 51-year-old Vietnam veteran had panic disorder that began 7 years prior to study participation. The panic attacks came out of the blue and were characterized by a tight chest, racing heart, sweating, and trembling. He avoided malls, coming to the VA hospital, and restaurants. As an example of the reason for his avoidance, he stated that he was afraid to be in a restaurant if he was unable to get a seat where his "back would be to the wall." It was clear from his

description that he avoided only places that reminded him of Vietnam. In the assessment of avoidance symptoms associated with PTSD, the veteran reiterated his avoidance of places that reminded him of his trauma and indicated that the avoidance had a significant impact on his life (i.e., "I'd like to go places but can't"). Consequently, in applying Guideline 1, the veteran was diagnosed with panic disorder without agoraphobia, and the avoidance was considered to be indicative of PTSD.

Similar considerations apply in distinguishing social phobia from the avoidance symptoms of PTSD, although this specific differential diagnostic issue did not arise in our study.

## 2. Are Symptoms Apparently Due to Specific Phobias Actually Avoidance Symptoms of PTSD?

Irrational fears of certain objects or situations are normally a hallmark of specific (or simple) phobia, but PTSD may produce similar symptoms of unreasonably avoiding objects or situations that resemble or symbolize the traumatic event (Brown & Wolfe, 1994; McNally & Saigh, 1993). Again, the irrational fear and avoidance should count toward either PTSD or specific phobia, but not both, and asking individuals to explain the reason for their fear determines the diagnosis. We diagnosed specific phobia only if the fear was not related to the traumatic event.

For example, the fear of small enclosed places might be a result of an injury suffered while exploring a tunnel during combat; the fear of heights might be related to the veteran's experience of being attacked while in a high place, such as a mountain or a plane; and the fear of blood could be related to seeing or experiencing combat-related wounds. In each of these instances, we would count the avoidance symptom toward PTSD rather than toward simple phobia. Using this guideline, we found that 12.2% ( $n = 14$ ) of the veterans with PTSD in our study also had a specific phobia distinct from PTSD.

*Case examples:* A 51-year-old Vietnam veteran reported that he had a phobia related to being on the telephone. He had fears of being shot because a headset had been shot out of his hand. The fear was clearly linked to his PTSD and was not diagnosed as a specific phobia. In contrast, a 62-year-old Vietnam veteran was "deathly afraid" of snakes or anything that looked like a snake. He would dream about being bitten and dying immediately if a snake bit him. Although he considered snakes to be a stressor in Vietnam, he stated that he was afraid of snakes regardless of his Vietnam experience. He was diagnosed with a specific phobia.

## 3. When Are Hallucinations Symptomatic of PTSD (e.g., Flashbacks) Versus a Nonpsychotic Near-Death Experience or an Independent Psychotic Disorder?

Hallucinations that were strongly related to the theme of a traumatic experience were considered to be a re-experiencing symptom of PTSD (a flashback) rather than an indication of a separate psychotic disorder. Similarly, we did not consider unusual spiritual experiences occurring only during a near-death episode (if that was the acute traumatic experience) to be psychotic symptoms, because such experiences are not in fact unusual among nonpsychotic persons in our culture (Roberts & Owen, 1988). We did not count such near-death experiences as symptoms of PTSD either.

Examples of hallucinations that we classified as PTSD re-experiencing rather than independent psychotic symptoms included hearing the cries for help of the wounded, seeing visions of dead friends from combat experiences, and experiencing the smell of death or the taste of blood or dirt. Examples of near-death spiritual experiences during a dangerous combat episode included hearing God's voice and experiencing an otherworldly light. On the basis of these guidelines, 57.4% ( $n = 66$ ) of the veterans with PTSD in the study reported having experienced PTSD-related hallucinations or flashbacks. Only 3.4% of the 207 male veterans who completed the interview process for participation in the study were disqualified because of a diagnosis of an independent psychotic disorder. A significant limitation of this finding is that during the initial referral process, clinicians were asked to refer only nonpsychotic individuals.

#### 4. How Do Mental Health Professionals Differentiate Overlapping Symptoms of PTSD and Depression?

Loss of interest, concentration difficulties, detachment from others, restricted affect, anger, insomnia, and guilt may be symptoms of PTSD, a depressive disorder, or both. To decide among these possibilities, we constructed a careful timeline of the patient's life, including the relative timing of trauma, major depressive episodes, and substance abuse. For loss of interest, concentration problems, detachment from others, anger, and restricted affect, we used the timing of onset and remission of the symptoms to help link the symptoms to the appropriate disorder. If one of these five symptoms began shortly after the trauma or shortly after the veteran's return to the United States, we usually attributed it to PTSD, not to depression. However, PTSD symptoms can also have a delayed onset (e.g., after a later highly stressful event or major life change, such as retirement or a spouse's death). When one of the five symptoms in question began long after the traumatic event, we determined whether the symptom persisted even in the absence of depressed mood or substance abuse. If so, we counted it as a PTSD symptom; otherwise, we attributed it to a depressive disorder. For some individuals, there was also a question of whether some of these symptoms might have been due to a substance use disorder. In such cases, we used the guidelines described in *DSM-IV* (American Psychiatric Association, 1994) for distinguishing substance-induced disorders from primary mood disorders.

Because insomnia was an almost universal, chronic problem for the combat veterans in our study, we found it nearly impossible to use timing or any other consistent means to attribute it to PTSD versus a depressive disorder. That is, in our chronic PTSD sample, it was not possible to determine if the insomnia was due to a progression of PTSD over time or if the insomnia was exclusively associated with depression. Likewise, problems with insomnia could not be distinguished on the basis of the content or reason for the insomnia in any clear-cut way. If the veterans had indicated that they only had insomnia because of nightmares, it could have been attributed to PTSD. However, the history was usually more complicated, with insomnia sometimes associated with disruptions from trauma-related nightmares and sometimes simply reported as disrupted sleep. Accordingly, we usually counted insomnia as a symptom of both PTSD and depression. Guilt clearly associated with a traumatic event (i.e., killing a child or surviving when others

died) was counted as a feature of PTSD; we ascribed other types of excessive guilt to a depressive disorder.

#### 5. When Are Symptoms of DSM-IV Personality Disorders Better Understood as Chronic PTSD Symptoms?

Disentangling symptoms of personality disorders from PTSD was difficult in our study because most of our participants' combat traumas occurred during their late adolescence or early 20s. Because these are critical periods for personality development, investigating pretrauma behavior was of little help in diagnosis (with the exception of inquiring about early adolescent antisocial behavior). Consequently, a personality disorder was diagnosed whenever the *DSM-IV* criteria were met, without trying to assess pretrauma personality traits. However, we did not count symptoms as personality disorder criteria if the veteran's explanation for the behavior clearly related it to the trauma.

Using this approach, we found that 45.2% of the veterans in our study were diagnosed with one or more personality disorders that were distinct from PTSD. Two types of personality disorder—avoidant and paranoid—provide especially relevant examples for this differential diagnosis.

In assessing for avoidant personality disorder, a veteran's report that he avoided jobs where he would have to deal with other people was considered indicative of the personality disorder only if the reason was a fear of criticism or rejection. The same behavior was considered a symptom of PTSD if the veteran explained it as wanting to avoid conflict or opportunities for angry outbursts. A veteran's reported difficulty in being open in intimate relationships was considered a symptom of PTSD if it was due to a mistrust of others or emotional numbing, whereas it was considered a symptom of avoidant personality disorder when it was due to a fear of being shamed or ridiculed. Being quiet when meeting new people was attributed to PTSD when the cause was a mistrust of others or a fear of being harassed about being a veteran, whereas it was attributed to avoidant personality disorder when it was due to feelings of inadequacy. Reluctance to try new activities was attributed to PTSD (or depression) if it was due to a loss of interest in activities or a tendency to isolate, whereas it was attributed to avoidant personality disorder when it was due to a fear of embarrassment. On the basis of these guidelines, we found that 12.2% ( $n = 14$ ) of the veterans with PTSD in our study were diagnosed with comorbid avoidant personality disorder.

*Case example:* A 49-year-old Vietnam veteran expressed a lifelong pattern of avoidance, stating "I don't like to do things with others watching. I'm shy and don't get involved. Anytime I'm meeting anyone, I [feel] judged. I'm afraid to be thought of as stupid. I'm afraid I'll say the wrong things. I've always felt that way. I hang my head and I'm afraid of being laughed at." Consistent with Guideline 5, the veteran was diagnosed with avoidant personality disorder, because the reason for his avoidance was concern about criticism and rejection. As noted earlier, similar considerations would be utilized in differentiating social phobia from avoidance symptoms of PTSD.

In assessing for paranoid personality disorder, we found that veterans with PTSD often reported suspiciousness that others were trying to harm them. We considered this a symptom of PTSD, not a personality disorder, when it was associated with a sense of betrayal during the traumatic experience or at homecoming, re-

sulting in mistrust of others, such as the government or those who have not experienced combat. In contrast, we counted suspiciousness as a symptom of paranoid personality disorder when it was more generalized and was not directly related to the trauma. A reluctance to confide in others, when ascribed to PTSD, reflected difficulties in feeling close to others because of emotional numbing; by contrast, when the difficulty was due to paranoid personality disorder, it was more strongly related to a fear that others would use information maliciously against the individual. Angry reactions to perceived insults are commonly found in Vietnam combat veterans with PTSD and may be related to past experiences of being discriminated against or criticized for being a Vietnam veteran, whereas anger due to paranoid personality disorder involves highly distorted or exaggerated perceptions of insults that are not directly related to being a veteran. On the basis of these guidelines, 17.4% ( $n = 20$ ) of the veterans with PTSD in our study were diagnosed with paranoid personality disorder distinct from PTSD.

*Case example:* A 52-year-old Vietnam veteran expressed considerable distrust of everyone and felt threatened in general. The distrust extended to multiple areas of his life and involved numerous individuals, including neighbors, VA staff, clergy, relatives, and his spouse. For example, he was reluctant to confide during psychotherapy sessions, and he felt that the staff used the information to hurt him. He doubted the loyalty of almost all of his relatives. The veteran indicated that ex-wives had cheated on him, and he felt his current wife was doing the same. He noted that his wife said he was paranoid.

In applying our diagnostic guidelines in the differentiation of personality disorders from symptoms that are more specific to PTSD, we found that our overall rates of personality disorders were lower than those reported in the two other major studies with veterans (Bollinger, Riggs, Blake, & Ruzek, 2000; Southwick, Yehuda, & Giller, 1993) that utilized structured assessments for the full range of personality disorders (Dunn et al., 2004), although the other studies consisted predominantly of inpatient participants.

### Implications for Practice

Clinicians in mental health settings should be aware that those suffering from PTSD might present with symptoms that initially point to diagnoses other than PTSD and that mistaken diagnoses in the PTSD population can have a detrimental clinical impact. Of particular concern is the possibility that PTSD-related hallucinations may be seen as a primary psychotic process. This is more likely to occur with clinicians unaccustomed to dealing with PTSD patients. Similarly, diagnosing a personality disorder for behavior that is actually related to PTSD would seriously misrepresent the patient. In these and other clinical dilemmas that we have discussed, mistaken diagnosis can lead to ineffective treatment.

We believe that the guidelines described here can lead to greater reliability in the diagnosis of PTSD and related comorbid conditions. It is widely recognized in the field that PTSD symptoms overlap with other diagnoses. However, we have found no literature that explicitly denotes how these overlapping symptoms are counted in the determination of specific disorders. Our diagnostic guidelines may indeed serve as an initial way to operationalize the directive in the *DSM-IV* sections on differential diagnosis that diagnosis of a given condition must not be better accounted for

(American Psychiatric Association, 1994) by another condition. Thus, the implications of counting symptoms once or twice are largely unknown, but establishment of our rules, based on clinical judgment as described here, makes the attribution more specific so that it can then be tested in a more formal way. Increased reliability, the goal of these guidelines, is the first step in enhancing the validity of psychiatric diagnoses. Future research might also empirically examine which specific symptoms are improperly designated to non-PTSD diagnoses.

Accurate diagnoses of PTSD and comorbid conditions are clearly a prerequisite for the determination of the most effective treatments in patients who have a very complicated clinical presentation. For example, in the case of a patient who has PTSD and a paranoid personality disorder (or even paranoid personality disorder alone), the individual might receive antipsychotic medication for the personality disorder, and group psychotherapy would be contraindicated. In contrast, the patient with only PTSD might receive an antidepressant medication and psychotherapy directed toward trauma-focused work (e.g., cognitive processing therapy). As another example, psychopharmacological treatment (e.g., antidepressants) may be similar for a patient with PTSD alone versus one with PTSD and depression, but the options for psychotherapy intervention would differ. For example, cognitive processing therapy may impact both PTSD and depressive symptoms, whereas exposure therapy would be an appropriate treatment for PTSD but not for depression.

A similar implication concerns recent efforts in the field to examine treating patients who have PTSD and certain comorbid conditions with combined psychotherapies, rather than treating the conditions sequentially. For example, seeking safety (Najavits, 2002) is a psychotherapy intervention that is geared toward simultaneously treating PTSD and substance abuse issues in patients with that dual diagnosis. Multiple channel exposure therapy (Falsetti & Resnick, 2000) is another example of a combined cognitive-behavioral intervention designed to treat patients who have PTSD and panic attacks. In all of these cases, accurate differential diagnosis is essential in determining the appropriate treatment modality.

Although the sample on which we based these guidelines contained only veterans, this sample also had extensive premilitary and postmilitary traumas similar to those experienced in other civilian populations, and the guidelines could be adapted accordingly. For example, a woman who was raped in the parking garage of a mall may present with a specific phobia related to parking garages. The presumed irrational fear may be better understood as avoidance related to the trauma associated with PTSD, rather than as indicative of a specific phobia.

Thus, we believe that the guidelines described can be adapted and extended to aid other epidemiologic and therapeutic studies of PTSD. Additionally, the guidelines may also aid the instruction of trainees who may be unfamiliar with the complexities of PTSD and comorbid conditions in a given clinical setting. As noted earlier, this is particularly important in the clarification of PTSD-related hallucinations versus those denoting a primary psychotic process.

Clearly, our guidelines do not cover every diagnostic dilemma, and they may at times be reasonably overridden by other diagnostic information. They can also be considered as hypotheses to be tested when future research uncovers independent gold standards

for diagnosing PTSD and frequently comorbid disorders. For example, if independent biological markers of PTSD and paranoid personality disorder become known, it would be possible to compare the differentiation of these two disorders according to the clinical guidelines and according to the biological markers. In the meantime, the guidelines represent a helpful starting point for more consistent diagnosis of PTSD.

## References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association.
- Blake, D., Weathers, F., Nagy, L., Kaloupek, D., Klauminzer, G., Charney, D., & Keane, T. (1990). A clinician rating scale for assessing current and lifetime PTSD: The CAPS-1-I. *Behavior Therapist*, *13*, 187–188.
- Blank, A. S., Jr. (1994). Clinical detection, diagnosis, and differential diagnosis of post-traumatic stress disorder. *Psychiatric Clinics of North America*, *17*, 351–383.
- Bollinger, A., Riggs, D., Blake, D., & Ruzek, J. (2000). Prevalence of personality disorders among combat veterans with posttraumatic stress disorder. *Journal of Traumatic Stress*, *13*, 255–270.
- Brady, K. T. (1997). Posttraumatic stress disorder and comorbidity: Recognizing the many faces of PTSD. *Journal of Clinical Psychiatry*, *58*(Suppl. 9), 12–15.
- Brown, P. J., & Wolfe, J. (1994). Substance abuse and post-traumatic stress disorder comorbidity. *Drug and Alcohol Dependence*, *35*, 51–59.
- Dunn, N. J., Rehm, L. P., Schillaci, J., Soucek, J., Mehta, P., Ashton, C., et al. (2007). A randomized trial of self-management and psychoeducational group therapies for comorbid posttraumatic stress disorder and depressive disorder. *Journal of Traumatic Stress*, *20*, 221–237.
- Dunn, N. J., Schillaci, J., Wagner, A., Rehm, L., Soucek, J., Menke, T., et al. (2000, November). *Development of a psychoeducational group therapy protocol*. Poster presented at the annual meeting of the International Society for Traumatic Stress Studies, San Antonio, Texas.
- Dunn, N. J., Yanasak, E., Schillaci, J., Simotas, S., Rehm, L. P., Soucek, J., et al. (2004). Personality disorders in veterans with posttraumatic stress disorder and depression. *Journal of Traumatic Stress*, *17*, 75–82.
- Falsetti, S. A., & Resnick, H. S. (2000). Cognitive behavioral treatment of PTSD with comorbid panic attacks. *Journal of Contemporary Psychotherapy*, *30*, 163–179.
- First, M. B., Gibbon, M., Spitzer, R. L., Williams, J. B. W., & Benjamin, L. S. (1997). *User's guide for the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)*. Washington, DC: American Psychiatric Press.
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1996). *User's guide for the Structured Clinical Interview for DSM-IV Axis I Disorders—Research Version (SCID-I, Version 2.0, 2/96 FINAL Version)*. Unpublished manual, Biometrics Research Department, New York Psychiatric Institute.
- Fleiss, J. (1971). Measuring nominal scale agreement among many raters. *Psychological Bulletin*, *76*, 378–382.
- Folstein, M. F., Folstein, S. E., & McHugh, P. (1975). Mini-Mental State: A practical method for grading the cognitive state of patients for the clinician. *Journal of Psychiatric Research*, *11*, 189–198.
- Friedman, M. J., & Yehuda, R. (1995). Post-traumatic stress disorder and comorbidity: Psychobiological approaches to differential diagnosis. In M. J. Friedman, D. S. Charney, & A. Y. Deutch (Eds.), *Neurobiological and clinical consequences of stress: From normal adaptation to PTSD* (pp. 429–445). Philadelphia: Lippincott-Raven.
- Hamilton, M. (1960). A rating scale for depression. *Journal of Neurology, Neurosurgery and Psychiatry*, *23*, 56–61.
- Hamner, M. B., Frueh, B. C., Ulmer, H. G., Huber, M. G., Twomey, T. J., Tyson, C., & Arana, G. W. (2000). Psychotic features in chronic post-traumatic stress disorder and schizophrenia: Comparative severity. *Journal of Nervous and Mental Disease*, *188*, 217–221.
- Keane, T., Taylor, K. L., & Penk, W. E. (1997). Differentiating post-traumatic stress disorder (PTSD) from major depression (MDD) and generalized anxiety disorder (GAD). *Journal of Anxiety Disorders*, *11*, 317–328.
- Keane, T., & Wolfe, J. (1990). Comorbidity in post-traumatic stress disorder: An analysis of community and clinical studies. *Journal of Applied Social Psychology*, *20*, 1776–1788.
- Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., & Weiss, D. S. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.
- McNally, R. J., & Saigh, P. A. (1993). On the distinction between traumatic simple phobia and posttraumatic stress disorder. In J. R. T. Davidson & E. B. Foa (Eds.), *Posttraumatic stress disorder: DSM-IV and beyond* (pp. 207–212). Washington, DC: American Psychiatric Press.
- Najavits, L. M. (2002). *Seeking safety: A treatment manual for PTSD and substance abuse*. New York: Guilford Press.
- Orsillo, S. M., Weathers, F. W., Litz, B. T., Steinberg, H. R., Huska, J. A., & Keane, T. M. (1996). Current and lifetime psychiatric disorders among veterans with war zone-related posttraumatic stress disorder. *Journal of Nervous and Mental Disease*, *184*, 307–313.
- Rehm, L. P. (1995). Psychotherapies for depression. In K. S. Dobson & K. D. Craig (Eds.), *Anxiety and depression in adults and children* (pp. 183–208). Thousand Oaks, CA: Sage.
- Roberts, G., & Owen, J. (1988). The near-death experience. *British Journal of Psychiatry*, *153*, 607–617.
- Roszell, D. K., McFall, M. E., & Malas, K. L. (1991). Frequency of symptoms and concurrent psychiatric disorder in Vietnam veterans with chronic PTSD. *Hospital and Community Psychiatry*, *42*, 293–296.
- Solomon, S., & Davidson, J. (1997). Trauma: Prevalence, impairment, service use, and cost. *Journal of Clinical Psychiatry*, *58*(Suppl. 9), 5–11.
- Southwick, S., Yehuda, R., & Giller, E. (1993). Personality disorders in treatment-seeking combat veterans with posttraumatic stress disorder. *American Journal of Psychiatry*, *150*, 1020–1023.

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