

# Empirical Examination of a Proposed Refinement to DSM-IV Posttraumatic Stress Disorder Symptom Criteria Using the National Comorbidity Survey Replication Data

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**Objective:** Recently, changes have been proposed to DSM-IV diagnostic criteria for posttraumatic stress disorder (PTSD) to refine the diagnosis because of concerns about its construct validity. Specifically, Spitzer et al. suggested narrowing the PTSD definition of *trauma*, specifying a symptom onset time frame after the trauma, and removing symptoms that overlap with other anxiety and mood disorders. We examined whether removing these overlapping anxiety/mood disorder symptoms resulted in differences (compared to the original DSM-IV PTSD criteria) in PTSD prevalence rates, diagnostic caseness, comorbidity and mental health–related disability, structural validity, and internal consistency.

**Method:** Cross-sectional data were examined from the National Comorbidity Survey Replication (N = 5692), a multistage area household probability sample of U.S. residents. PTSD diagnostic and symptom data and diagnostic data for other Axis I disorders were taken from the Composite International Diagnostic Interview. The study was conducted from February 2001 to December 2003.

**Results:** After removing PTSD symptoms overlapping with those of other anxiety and mood disorders, we found that the lifetime PTSD prevalence dropped only from 6.81% to 6.42%. Nevertheless, a sizeable proportion of PTSD-diagnosed persons would consequently lose PTSD caseness. Little difference was found between the criteria sets in diagnostic comorbidity and disability, structural validity, and internal consistency.

**Conclusions:** These data provide evidence that PTSD's overlapping anxiety and mood disorder symptoms are not responsible for PTSD's prevalence, diagnostic comorbidity, and construct validity. Although the proposed symptom criteria revision would result in fewer symptoms by which to evaluate PTSD, it may not address questions raised about the diagnosis's construct validity.

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The diagnosis of posttraumatic stress disorder (PTSD), added to DSM-III in 1980,<sup>1</sup> has been the subject of much controversy and debate regarding its fundamental assumptions, prevalence, clinical utility, and even diagnostic validity.<sup>2–4</sup> Notably, the diagnostic criteria for PTSD have been substantially revised in subsequent DSM editions,<sup>5</sup> quite differently from the way in which other disorders have been revised over time. As a result, there is a marked difference between DSM-IV and ICD-10 diagnostic criteria for PTSD.<sup>6</sup> A recent special issue of *The Journal of Anxiety Disorders*<sup>7</sup> focused attention on some of these concerns, most notably the construct validity of PTSD. In particular, McHugh and Treisman<sup>8</sup> argue that the contemporary PTSD construct is insufficiently distinct from other mental disorders, that it lacks empirical support for construct validity, and that it has moved the mental health field away from a sophisticated understanding of natural emotional responses to traumatic event exposure.

In response to these concerns about the construct validity of PTSD, Spitzer et al.<sup>6</sup> recently argued for a revised PTSD criteria set for DSM-V. This revision aims to produce a refined set of diagnostic criteria that more accurately captures posttraumatic phenomenology while minimizing overlap and associations with other similar disorders. The changes proposed by Spitzer and colleagues include (1) tightening the traumatic stressor criterion (A), allowing only qualifying traumas that are directly experienced or witnessed (eliminating indirectly experienced traumas reported about someone else); (2) requiring either that symptoms develop within a week of the traumatic event, or, in the case of delayed onset, that

symptom commencement be associated with a thematically related trauma; (3) ensuring that symptoms are not due to exacerbation of a preexisting mood, anxiety, or personality disorder or to malingering; and (4) removing the acute, chronic, and delayed-onset specifiers.

One major change proposed by Spitzer et al.<sup>6</sup> that is relevant to the present study involves removing 5 symptoms from PTSD's Criterion C (avoidance and numbing) and D (hyperarousal). Four of these symptoms, anhedonia (C4), sleep disturbance (D1), irritability (D2), and impaired concentration (D3), substantially overlap with symptom criteria for major depressive and generalized anxiety disorders. The fifth symptom, impaired recall of the trauma (C3), does not fit with the original intended focus of PTSD and can occur for reasons other than post-traumatic stress (e.g., normal memory dissipation over time and age-related cognitive decline). Additionally, Spitzer and colleagues proposed combining the remaining Criterion C and D symptoms into a single avoidance/hyperarousal cluster, requiring at least 4 symptoms present.

In the present article, we focus on the PTSD symptom deletions proposed by Spitzer et al.<sup>6</sup> and not on other proposed diagnostic changes, which we could not feasibly incorporate into the present study. Our aim was to examine the impact of removing the suggested symptoms in an existing dataset that has previously reported the prevalence of DSM-IV PTSD.<sup>9</sup> Specifically, we investigated whether removing these symptoms would result in (1) different lifetime PTSD prevalence rates than previously reported; (2) a significant percentage of individuals whose PTSD diagnostic status changes in either direction; (3) different rates of diagnostic comorbidity between PTSD and other prevalent mental disorders and mental health disability; (4) differences in structural validity for the disorder, and (5) different internal consistency estimates. We examined these research questions using data from the National Comorbidity Survey Replication (NCS-R),<sup>10</sup> because it represents the largest recent epidemiologic study that evaluated PTSD prevalence in the general population.

## METHOD

### Sample

The NCS-R<sup>10</sup> is a nationally stratified, multistage area household probability sample of noninstitutionalized adults (aged 15 years and older) investigating socio-demographic characteristics and mental health status. The NCS-R was conducted with 9282 participants in the early 2000s (NCS Part I), with demographic characteristics presented in previous NCS-R reports. The present article reports on the representative subsample of participants completing the NCS-R Part II (which evaluated PTSD,  $N = 5692$ ). Informed consent was obtained for the study, as well as institutional review board approval.

The NCS-R was conducted from February 2001 to December 2003.

### Instruments

**Diagnostic assessment.** The World Mental Health Survey Initiative version of the structured Composite International Diagnostic Interview (CIDI),<sup>11</sup> evidencing adequate concordance with the Structured Clinical Interview for DSM-IV (SCID)<sup>12</sup> and adequate psychometric properties in general for previous CIDI versions,<sup>13,14</sup> was used to diagnose DSM-IV mental disorders. In addition to the lifetime PTSD diagnostic variable, we also examined lifetime diagnostic variables for major depressive and manic episodes, as well as dysthymic, generalized anxiety, and panic disorders; specific and social phobias; agoraphobia; and alcohol and drug abuse/dependence. Diagnostic algorithms according to DSM-IV, discussed elsewhere,<sup>9</sup> were used to assign diagnoses. (In the NCS-R, some diagnostic variables have a hierarchy rule option, excluding a diagnosis if it occurs solely in the presence of another disorder. Since PTSD lacks a hierarchy rule option in the NCS-R, and since we wanted to examine diagnostic comorbidity broadly rather than narrowly, we used nonhierarchy diagnoses exclusively.)

Of relevance to PTSD, participants were first asked about previous exposure to a variety of traumatic events meeting DSM-IV PTSD stressor criterion (A1). Subsequently, binary ("yes"/"no") PTSD symptom ratings (using DSM-IV PTSD criteria) were queried in relation to the respondent's only traumatic event (assuming the event was associated with initial fear, helplessness, or horror according to PTSD Criterion A2). For those endorsing more than 1 trauma, the most upsetting occurrence of their most upsetting traumatic event type was used. (In addition, individuals whose most upsetting occurrence was different from an event that was randomly selected by NCS-R investigators were instructed to rate their PTSD symptoms based on both events separately. For these participants, PTSD diagnoses were assigned on the basis of meeting PTSD criteria from either of these 2 events.)

We also assessed mental health-related disability, based on whether respondents experienced a significant reduction in or were unable to perform their usual activities due to a mental health problem for at least 1 day in the past month. This item, associated with an increased likelihood of recent mental health treatment use, has been previously reported on in the original NCS.<sup>15</sup>

### Analyses

NCS-R Part II sampling weights were used to adjust for differential household size, nonresponse, and post-stratification. We used Stata 9.0 software (StataCorp LP, College Station, Tex.) to examine whether the Spitzer et al.<sup>6</sup> symptom deletions resulted in differences in PTSD prevalence rates, diagnostic status, diagnostic comor-

**Table 1. Diagnostic Comorbidity Differences Between DSM-IV and Spitzer et al.<sup>6</sup> PTSD Diagnoses and Between Overlapping and Nonoverlapping Symptoms<sup>a</sup>**

Comorbid Disorder Diagnosed	DSM-IV PTSD		Spitzer et al. <sup>6</sup> PTSD		<i>z</i> <sup>b,c</sup>	5 Deleted PTSD	12 Remaining PTSD	<i>z</i> <sup>b,d</sup>
	Diagnosis, % (SE)	N	Diagnosis, % (SE)	N		Items, Mean <i>r</i> (N = 564)	Items, Mean <i>r</i> (N = 569)	
Specific disorder								
MDE	54.72 (2.73)	212	54.41 (2.83)	199	.12	.17	.12	.86
GAD	28.03 (2.15)	108	27.98 (2.21)	102	.02	.12	.12	.00
Specific phobia	35.21 (2.42)	136	36.82 (2.52)	135	.65	.10	.13	.51
Social phobia	33.39 (2.30)	129	35.55 (2.44)	130	.89	.14	.13	.17
Alcohol abuse/dependence	28.22 (2.33)	109	29.41 (2.44)	108	.51	.06	.05	.17
Any disorder								
No other diagnosis	19.27 (2.87)	75	18.93 (2.97)	69	.17	.14	.15	.17
1 diagnosis	18.05 (1.78)	70	16.89 (1.72)	62	.59	.01	.04	.50
2 diagnoses	19.06 (1.93)	74	18.25 (2.02)	67	.40	.07	.03	.67
≥ 3 diagnoses	43.62 (2.56)	169	45.93 (2.69)	168	.90	.18	.18	.00
Disability	23.76 (2.10)	92	24.51 (2.12)	90	.34	.14	.11	.51

<sup>a</sup>Ns reflect weighted numbers, rounded to the nearest whole number.

<sup>b</sup>Binomial approximation *z* test statistic for proportions, using an average sample size of 377 across PTSD diagnostic systems.

<sup>c</sup>*z* Tests comparing comorbidity rates between DSM-IV PTSD and Spitzer et al.<sup>6</sup> PTSD criteria.

<sup>d</sup>*z* Tests comparing correlations with comorbidity between the 5 symptoms Spitzer et al.<sup>6</sup> proposed removing and the remaining 12 DSM-IV PTSD symptoms.

\**p* < .05.

Abbreviations: GAD = generalized anxiety disorder, MDE = major depressive episode, PTSD = posttraumatic stress disorder.

bility and disability, and internal consistency. We used Mplus 4.2 software (Muthén & Muthén, Los Angeles, Calif.) to examine the symptom deletions' impact on the structural validity of PTSD. Analyses were 2-tailed.

## RESULTS

### Prevalence

Consistent with previously published NCS-R lifetime DSM-IV epidemiologic data,<sup>9</sup> PTSD was diagnosed in 387.53 (weighted) participants (6.81%, SE = 3.60). After removing symptoms missing in the Spitzer et al.<sup>6</sup> model, the rate of PTSD diagnoses was quite similar in 365.72 (weighted) participants (6.42%, SE = 3.51). A statistically significant difference was found between these proportions (binomial approximation, *z* = 6.31, *p* < .001).<sup>16</sup> While the difference in these proportions appears small (< .5%), it may be quite meaningful, in that a number of individuals with DSM-IV PTSD would lose the diagnosis under the revised Spitzer et al. model.

More specifically, with regard to changes in PTSD status, approximately 49 (weighted) participants—roughly 13% of those meeting PTSD criteria according to DSM-IV—would no longer meet criteria using the revised Spitzer et al.<sup>6</sup> symptom criteria. In addition, 27 participants—roughly 7% of those meeting Spitzer et al.<sup>6</sup> criteria—would not meet DSM-IV PTSD criteria. The level of agreement between these diagnostic systems was substantial ( $\kappa$  = .91 [98.28% agreement], *z* = 68.36, *p* < .001). Nonetheless, in combination, approximately 1.34% of the entire sample (49 + 27 weighted subjects/5692) changed diagnostic status for PTSD when using the Spitzer et al. criteria.

### Comorbidity and Disability

Next, we examined if the removal of PTSD symptoms was associated with different prevalence rates of comorbid mood, anxiety, and substance use disorders and disability. Table 1 includes results from PTSD's most commonly comorbid disorders in this sample, indicating that the rates of diagnostic comorbidity and disability were similar whether criteria from DSM-IV or Spitzer et al. were applied.

We also expected that, using Spearman correlations, the relations with comorbid disorders and disability would be higher for the set of 5 PTSD symptoms that Spitzer et al.<sup>6</sup> suggested deleting than for the remaining 12 nonoverlapping DSM-IV PTSD symptoms. However, as seen in Table 1, the average relationship with comorbidity for the 5 removed symptoms was not significantly different from that for the 12 remaining PTSD symptoms, using *z* tests for dependent correlations.

We also attempted to examine whether endorsement of several of the 5 PTSD symptoms excluded by Spitzer et al.<sup>6</sup> represented an adequate exclusionary criterion for diagnosing PTSD, in terms of lowering rates of comorbidity and disability. However, endorsement of these symptoms was so prevalent in the dataset's PTSD-diagnosed participants that the vast majority of participants (87%) had at least 3 of these symptoms. Thus, using this exclusionary criterion was not feasible.

### Structural Validity

We intended to minimize missing item-level PTSD data for subsequent factor-analytic and reliability analyses to preserve the sample size. We excluded 107 of the 877 trauma-exposed participants due to substantial miss-

Table 2. Confirmatory Factor-Analytic Models Tested

DSM-IV PTSD Item	Models			
	Spitzer et al. <sup>6</sup> 2 Factors	Spitzer et al. <sup>6</sup> 3 Factors	DSM-IV 3 Factors	DSM-IV 4 Factors
B1. Intrusive thoughts	Reexperiencing	Reexperiencing	Reexperiencing	Reexperiencing
B2. Nightmares	Reexperiencing	Reexperiencing	Reexperiencing	Reexperiencing
B3. Flashbacks	Reexperiencing	Reexperiencing	Reexperiencing	Reexperiencing
B4. Cued emotional reactivity	Reexperiencing	Reexperiencing	Reexperiencing	Reexperiencing
B5. Cued physical reactivity	Reexperiencing	Reexperiencing	Reexperiencing	Reexperiencing
C1. Avoiding thoughts	Avoidance/Hyperarousal	Avoidance	Avoidance/Numbing	Avoidance
C2. Avoiding reminders	Avoidance/Hyperarousal	Avoidance	Avoidance/Numbing	Avoidance
C3. Specific amnesia	NA <sup>a</sup>	NA <sup>a</sup>	Avoidance/Numbing	Numbing
C4. Loss of interest	NA <sup>a</sup>	NA <sup>a</sup>	Avoidance/Numbing	Numbing
C5. Feeling distant	Avoidance/Hyperarousal	Avoidance	Avoidance/Numbing	Numbing
C6. Feeling numb	Avoidance/Hyperarousal	Avoidance	Avoidance/Numbing	Numbing
C7. Lack of future plan	Avoidance/Hyperarousal	Avoidance	Avoidance/Numbing	Numbing
D1. Difficulty sleeping	NA <sup>a</sup>	NA <sup>a</sup>	Hyperarousal	Hyperarousal
D2. Irritability	NA <sup>a</sup>	NA <sup>a</sup>	Hyperarousal	Hyperarousal
D3. Difficulty concentrating	NA <sup>a</sup>	NA <sup>a</sup>	Hyperarousal	Hyperarousal
D4. Overly alert/hypervigilance	Avoidance/Hyperarousal	Hyperarousal	Hyperarousal	Hyperarousal
D5. Exaggerated startle response	Avoidance/Hyperarousal	Hyperarousal	Hyperarousal	Hyperarousal

<sup>a</sup>Item removed by Spitzer et al.<sup>6</sup>

Abbreviation: NA = not applicable, PTSD = posttraumatic stress disorder.

ing data. With missingness statistically attributed to random reasons, remaining missing data were imputed using maximum likelihood procedures.

We conducted confirmatory factor analyses (CFAs) for the PTSD diagnostic systems. (In all CFAs, for participants with multiple sets of PTSD ratings as discussed above, we used ratings for their most upsetting event.) We first tested how well the Spitzer et al.<sup>6</sup> covariance matrices for the 2-factor PTSD model (reexperiencing and avoidance/hyperarousal; implementing the 5-symptom deletion) related to the NCS-R's 12 corresponding CIDI PTSD module symptoms, with factors allowed to covary. We compared this model's results to the standard 3-factor (17-item) DSM-IV PTSD model (reexperiencing, avoidance/numbing, hyperarousal). However, given empirical evidence for separating effortful avoidance and emotional numbing, found in DSM-IV PTSD Criterion C, into 2 separate factors,<sup>17</sup> we also tested such a 4-factor structure. These models are outlined in Table 2.

It should be noted that, since the observed dependent variables were binary ("yes"/"no") ratings, we implemented robust (mean- and variance-adjusted) weighted least-squares estimations using polychoric correlations and probit coefficients.<sup>18</sup> Chi-square tests of model fit were examined in conjunction with relative and absolute goodness-of-fit indices, including the Tucker-Lewis index (TLI), comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) (interpreted when RMSEA  $\leq$  .06–.08, SRMR  $\leq$  .08–.10, CFI/TLI  $>$  .90–.95).<sup>19,20</sup>

The Spitzer et al.<sup>6</sup> 2-factor model (having removed overlapping symptoms) did not fit the data well, (robust  $\chi^2 = 92.36$ ,  $df = 23$ ,  $N = 770$ ,  $p < .001$ , TLI = .86,

CFI = .85, RMSEA = .06, SRMR = .10). However, since this poor fit could simply be due to the merging of avoidance and hyperarousal factors, we also tested a similar 12-item model that separated these factors. This revised 3-factor model demonstrated an adequate fit (robust  $\chi^2 = 56.30$ ,  $df = 22$ ,  $N = 770$ ,  $p < .001$ , TLI = .93, CFI = .93, RMSEA = .05, SRMR = .09) and was a significant improvement over the 2-factor model (robust  $\chi^2_{\text{change}} = 56.07$ ,  $df = 2$ ,  $N = 770$ ,  $p < .001$ .) Because robust  $\chi^2$  statistics were used, models were compared with a correction factor.<sup>21</sup>

The 3-factor DSM-IV PTSD model yielded some evidence for a reasonably good fit, (robust  $\chi^2 = 97.469$ ,  $df = 31$ ,  $N = 770$ ,  $p < .001$ , TLI = .89, CFI = .89, RMSEA = .05, SRMR = .10). However, fit indices were not as impressive as in the Spitzer et al.<sup>6</sup> model with 3 factors. ( $\chi^2$  Difference tests are only appropriate for comparing nested models. Thus, the only appropriate difference tests were for comparing the 2 Spitzer et al. models and for comparing the 2 DSM-IV PTSD models.) When separating the avoidance and numbing symptoms found in the 3-factor DSM-IV model to derive a 4-factor model, an adequate fit resulted (robust  $\chi^2 = 88.25$ ,  $df = 31$ ,  $N = 770$ ,  $p < .001$ , TLI = .91, CFI = .91, RMSEA = .05, SRMR = .09), representing a significant improvement over the 3-factor model (robust  $\chi^2_{\text{change}} = 31.18$ ,  $df = 3$ ,  $N = 770$ ,  $p < .001$ ).

### Reliability

Finally, we estimated the internal consistency (Chronbach  $\alpha$ ) of the 17 DSM-IV PTSD items, in relation to the reduced 12-item Spitzer et al.<sup>6</sup> model. Reliability dropped only from .77 (DSM-IV model) to .71 (Spitzer et al. model).

## DISCUSSION

This article tested the Spitzer et al.<sup>6</sup> proposal to remove DSM-IV PTSD symptoms that overlap with anxiety and mood disorders. The proposal specifically aimed to refine and strengthen the diagnosis of PTSD. After deleting symptoms of anhedonia, concentration difficulty, irritability, sleep impairment, and impaired recall of the trauma, little appreciable difference (< .5%) was observed in lifetime PTSD prevalence. Nonetheless, approximately 13% of people with a DSM-IV PTSD diagnosis, a meaningful proportion of cases, lost their caseness for the disorder under the Spitzer et al. proposed symptom revisions.

Results also showed that the symptom deletions had virtually no impact on rates of diagnostic comorbidity or disability. This finding was unexpected, since removing overlapping anxiety and mood disorder symptoms was certainly hypothesized to lower comorbidity rates. Furthermore, when a 12-item (3-factor) model was used (having implemented the proposed symptom deletions), structural validity was quite comparable to that of the DSM-IV 17-item (3-factor) model. Finally, internal consistency was slightly lower after symptom deletions, which is not surprising based on the attenuation of reliability often found when removing a measure's items.

How should these findings be interpreted? One possible conclusion is that PTSD's association with other disorders may be a natural aspect of the disorder's phenomenology rather than noise or error introduced in the diagnosis of PTSD. This conclusion is consistent with the possibility that PTSD is not a specifically distinct disorder per se, but rather it involves symptoms encountered in several other disorders. Whether or not this conclusion is accurate, our results appear to replicate and extend previous work specifically on the overlap between PTSD and major depressive disorder symptoms. In particular, Franklin and Zimmerman<sup>22</sup> demonstrated that, among mental health patients, removing DSM-IV PTSD symptoms that overlap with those of major depressive disorder made little difference in diagnosing these disorders using structured interviews.

Furthermore, our findings that removing overlapping symptoms did not alter PTSD's diagnosis or construct validity are supported by previous research. In particular, Franklin et al.<sup>23</sup> demonstrated that the optimal termination point in PTSD diagnostic assessment is immediately after Criterion B, with few cases meeting Criteria C and D once Criterion B is absent. Thus, perhaps Criterion B (reexperiencing symptoms) is what substantially distinguishes PTSD from other similar mental disorders, as previously suggested,<sup>24</sup> and therefore altering Criteria C and D may not dramatically affect the diagnosis as a result.

Other researchers have suggested radical changes to the DSM. One such proposal involved effectively reorga-

nizing anxiety and mood disorders into fear and misery/distress disorder categories, respectively, to better account for shared emotional processes and comorbidity rates among conditions such as generalized anxiety disorder, major depressive disorder, and PTSD.<sup>25,26</sup> Furthermore, recent empirical evidence finds support for a general dysphoria/distress component to PTSD, reflecting shared variance with other depressive and anxiety disorders.<sup>24,27</sup> In fact, Simms and colleagues<sup>24</sup> suggested that future DSM editions should prioritize the diagnosis of PTSD, such that intrusive reexperiencing symptoms, those most specific to PTSD, should be given more diagnostic weight than other clusters' symptoms. They acknowledge, however, that general dysphoria should still be assessed as part of PTSD diagnosis, since this pathology is naturally a part of many PTSD patients' clinical presentations.<sup>24</sup>

Regarding the suggestion by Spitzer and colleagues<sup>6</sup> to remove DSM-IV PTSD symptoms that overlap with those of anxiety/mood disorders, it should be noted that there are theoretical problems with altering criteria sets because of overlapping/comorbid symptoms. Many individuals with PTSD and major depressive disorder, for example, may not have 2 distinct diagnoses per se but rather a particular pathologic reaction to a traumatic stressor. Removing shared emotional processes to purify and refine PTSD may effectively reduce the diagnosis's construct validity. Nonetheless, overall there is growing evidence to suggest that the DSM-IV PTSD model is inadequate and consideration should be seriously given to alternative models.<sup>24,27</sup>

It is noteworthy that, in both the DSM-IV and Spitzer et al.<sup>6</sup> PTSD criteria, at least 1 of 5 Criterion B symptoms is required. However, the Spitzer et al.<sup>6</sup> model has 5 fewer symptoms in the combined C/D Criterion and requires endorsement of *at least 4 of 7* symptoms (or a minimum of 57% of symptoms endorsed). By contrast, DSM-IV requires endorsing at least 3 of 7 Criterion C symptoms and at least 2 of 5 Criterion D symptoms (for a C + D total of at least 5 symptoms of 12, or a minimum of 42% of C/D symptoms endorsed). Thus, it is especially interesting that, given the more stringent symptom requirements of the Spitzer et al. model, the revised PTSD model performed on par with the DSM-IV model in many respects.

One limitation of this study is that we did not incorporate all of the revisions to DSM-IV PTSD criteria suggested by Spitzer et al.<sup>6</sup> For example, we were unable to examine any effects from implementing suggested changes to the nature of the traumatic stressor—namely, requiring a more conservative type of stressor by excluding indirectly experienced traumas. Based on how PTSD was evaluated in the NCS-R, it was not possible to investigate this criterion revision empirically. Thus, it remains unclear whether changes to the traumatic stressor criterion proposed by Spitzer et al. would result in differences in diagnostic prevalence, comorbidity, or structural valid-

ity. In fact, liberalizing the traumatic stressor to include indirectly experienced traumas began with DSM-IV, and since that time the reported prevalence of trauma has already increased substantially.<sup>28</sup> We were additionally unable to examine other important revisions to the DSM-IV diagnostic criteria for PTSD suggested by Spitzer et al., including changes to the definition of *delayed onset*, ensuring that symptoms are not due to an exacerbation of a preexisting mental disorder or malingering and removing *acute* versus *chronic* specifiers.

## CONCLUSION

Our data provide evidence that, even after removing DSM-IV PTSD symptoms that overlap with those of other anxiety and mood disorders, the prevalence, comorbidity, and structural validity of PTSD do not diverge considerably from those of symptom criteria for PTSD found in DSM-IV. Thus, despite the expectation that the model proposed by Spitzer et al.<sup>6</sup> would refine the diagnosis and result in substantially less comorbidity, this outcome was not realized. Perhaps other competing PTSD models deserve future attention, given strong conceptual and empirical support for their use. Furthermore, additional empirical study is needed with diverse samples to evaluate PTSD symptoms in terms of their diagnostic specificity for differentiating PTSD from other mood and anxiety disorders, ensuring that only symptoms related directly to traumatic event exposure are retained. Further research is also necessary to empirically determine the clinical threshold for individual symptoms (e.g., to denote a pathologic response), the diagnostic threshold for PTSD (e.g., minimum number of symptoms to meet disorder criteria), and the degree of functional impairment appropriate for a diagnosis of a trauma-related “disorder.”

Efforts to increase our understanding of the natural emotional responses to traumatic events depend on the further empirical study and continued discussion regarding the construct validity of PTSD. With the ongoing development of DSM-V, this is a timely issue in need of additional empirical data.

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## Corrections

In the article “Empirical Examination of a Proposed Refinement to DSM-IV Posttraumatic Stress Disorder Symptom Criteria Using the National Comorbidity Survey Replication Data” by Jon D. Elhai, Ph.D., and colleagues in the April 2008 issue (*J Clin Psychiatry* 2008;69:597–602), 2 inaccuracies were reported in the first paragraph of the Results section on page 599.

- (1) The correct standard errors for lifetime diagnostic prevalence rates of PTSD are 0.360 for the original *DSM-IV* PTSD model and 0.351 for the Spitzer PTSD model.
- (2) The binomial approximation z test that compared the *DSM-IV* and Spitzer lifetime PTSD prevalence rates was inaccurately reported as being statistically significant, because of an error the authors made in calculating this comparison. In fact, no statistically significant difference is found between these prevalence rates,  $z = 1.17$ ,  $p > .05$ . Thus, the Spitzer model did not statistically change *DSM-IV* PTSD’s prevalence rate.

In the article “The History and Current State of Antidepressant Clinical Trial Design: A Call to Action for Proof-of-Concept Studies” by Alan J. Gelenberg, M.D., and colleagues in the October 2008 issue (*J Clin Psychiatry* 2008;69:1513–1528), the following conference participants should have been acknowledged as follows:

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The online versions of these articles have been corrected.