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Sex Differences in DSM-IV Posttraumatic Stress Disorder Symptoms Expression Using Item Response Theory: a Population-based Study

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Abstract

Background—Whether there are systematic sex differences in posttraumatic stress disorder (PTSD) symptom expression remains debated. Using methods based on item response theory (IRT), we aimed at examining differences in the likelihood of reporting DSM-IV symptoms of PTSD between women and men, while stratifying for major trauma type and equating for PTSD severity.

Method—We compared data from women and men in a large nationally representative adult sample, the National Epidemiologic Survey on Alcohol and Related Conditions. Analyses were conducted in the full population sample of individuals who met the DSM-IV criterion A (n = 23,860) and in subsamples according to trauma types.

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Results—The clinical presentation of the 17 DSM-IV PTSD symptoms in the general population did not substantially differ in women and men in the full population and by trauma type after equating for levels of PTSD severity. The only exception was the symptom "foreshortened future", which was more likely endorsed by men at equivalent levels of PTSD severity.

Limitations—The retrospective nature of the assessment of PTSD symptoms could have led to recall bias. Our sample size was too small to draw conclusions among individuals who experienced war-related traumas.

Conclusions—Our findings suggest that the clinical presentation of PTSD does not differ substantially between women and men. We also provide additional psychometric support to the exclusion of the symptom "foreshortened future" from the diagnostic criteria for PTSD in the DSM-5.

The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) has moved posttraumatic stress disorder (PTSD) from the chapter on anxiety disorders to a new class of "trauma and stressor-related disorders" (American Psychiatric Association et al., 2013). This revision has brought to the fore considerations regarding expressions of distress as a result of traumatic experiences. These considerations are crucial because the nosological status of PTSD has important implications for the assessment and clinical management of patients with this disorder (Andreasen, 2010; Kilpatrick et al., 2013).

Epidemiological studies in general population samples have generally found that the prevalence of PTSD is higher in women than in men (Kessler et al., 1995; Pietrzak et al., 2011), leading several authors to hypothesize that sex may influence PTSD symptom expression (Carmassi et al., 2014; McLean et al., 2011; Stein et al., 2000; Weissman et al., 2005). Despite the clinical and research importance of this issue, studies examining the phenomenology of PTSD by sex are limited (Ditlevsen and Elklit, 2012; Peters et al., 2006; Stein et al., 2000). Determining whether there are sex differences in PTSD symptom expression could yet have potentially far-reaching implications for the clinical assessment and management of patients with PTSD, which still remains an underdiagnosed and undertreated condition (Bernardy et al., 2013; Felmingham and Bryant, 2012; Stenmark et al., 2014) .

While some studies have suggested that PTSD symptom expression in women and men are more similar than different (Chung and Breslau, 2008), others indicate that certain PTSD symptoms may differ between women and men (Breslau et al., 1999; He et al., 2014; Palm et al., 2009; Peters et al., 2006). Specifically, women may be more likely to endorse "memory lapses" of the stressful event (He et al., 2014), "feeling of detachment " (He et al., 2014; Palm et al., 2009), "emotionally numb" (Breslau et al., 1999), "avoid conversations/ places/people" (Breslau et al., 1999), "avoid thoughts" (Breslau et al., 1999; Peters et al., 2006), "difficulty sleeping" (Peters et al., 2006) and "exaggerated startled" (Palm et al., 2009; Peters et al., 2006), while men may be more likely to report a sense of "foreshortened

future" (He et al., 2014; Palm et al., 2009), "intrusive thoughts" (He et al., 2014; Palm et al., 2009), "nightmares" (Palm et al., 2009) and "irritability" (Breslau et al., 1999; Palm et al., 2009). In addition, women may express more distress than men across almost all PTSD symptoms except for "hypervigilance" (Hourani et al., 2015).

However, prior research has often been limited by methodological constraints such as reliance on samples of convenience, incomplete assessment of full range of DSM-IV PTSD criteria, or lack of control for symptoms severity between groups. This last point is critical because sex differences in PTSD symptom expression reported in the literature may either reflect true phenomenological sex differences or result from differences in overall symptom severity between women and men (Peters et al., 2006). To our knowledge, only two studies (He et al., 2014; Palm et al., 2009) based on data from the National Comorbidity-Study Replication (NCS-R) (Kessler and Merikangas, 2004) have examined sex differences in PTSD symptom expression while adjusting for potential differences in PTSD severity between sexes. Their results suggest that women were more likely than men to endorse "feeling of detachment" (He et al., 2014; Palm et al., 2009) and "exaggerated startle » (Palm et al., 2009), whereas men were more likely to report a sense of "foreshortened future" (He et al., 2014; Palm et al., 2009), "intrusive thoughts" (He et al., 2014; Palm et al., 2009), "nightmares" (Palm et al., 2009) as well as "irritability" (Palm et al., 2009). However, prior work supports that PTSD symptom expression may vary according to trauma types (Breslau and Kessler, 2001; Cloitre et al., 2009; Stein et al., 2000). Because prevalence rates of several trauma types substantially differ between men and women (Tolin and Foa, 2006), these results support the need to examine whether PTSD symptom expression differ between women and men while stratifying by major trauma type.

Accordingly, using item response theory (IRT) methods (Lord and Novick, 1968) in a large nationally representative sample, our aim was to examine sex differences in the likelihood of reporting DSM-IV PTSD symptoms by major trauma type, when equating for levels of PTSD severity. IRT methods provide significant improvements for exploring differential symptom expression over previous statistical techniques as IRT approaches allow examining the likelihood that a particular symptom will be reported given a particular level of PTSD severity (Nicolas Hoertel et al., 2015; Hoertel et al., 2014; Peyre et al., 2012; Weinstock et al., 2010, 2009). We hypothesized that symptom features of PTSD substantially differ between women and men after adjusting for levels of PTSD severity, even when stratifying by major trauma type.

Methods

Sample

Data were drawn from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), a nationally representative face-to-face survey of the US adult population, conducted in 2004–2005 by the National Institute on Alcoholism and Alcohol Abuse (NIAAA) and described in detail elsewhere (Grant et al., 2009; N. Hoertel et al., 2015). The second wave of NESARC was a representative sample of the civilian, non-institutionalized United States population, aged 20 years and older. The overall survey response rate was 70.2%, reflecting 34,653 completed interviews (Grant et al., 2009).

Weighted data were adjusted to be representative of the civilian population on socio-demographic variables including region, age, race/ethnicity and sex, based on the 2000 Decennial Census. The research protocol, including informed consent procedures, received full human subjects review and approval from the US Census Bureau and the Office of Management and Budget (Grant et al., 2009).

Measures

PTSD symptoms and diagnosis and traumatic events were assessed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule, DSM-IV version (AUDADIS-IV), a structured diagnostic instrument administered face to face by trained lay interviewers.

Assessment of lifetime DSM-IV symptoms of PTSD and major types of traumatic events

Respondents were asked about lifetime exposure to 27 different traumatic events (*e.g.*, kidnapping, rape) (Kessler et al., 1995; Pietrzak et al., 2011). Participants who endorsed experiencing a traumatic event were asked about symptoms related to that event. If they reported more than one event, participants were asked about symptoms related to the worst event (Kessler et al., 1995; Pietrzak et al., 2011). Based on prior research (Breslau et al., 2006, 2004; Roberts et al., 2011), the traumatic events were grouped into six major categories: (1) "child maltreatment" (three items); (2) "interpersonal violence" (six items); (3) "war-related traumas" (four items); (4) "other injury or shocking event" (five items); (5) "learning of a trauma to a close friend or relative" (three items); and (6) "learning of an unexpected death" (one item). A total of 23,860 participants met DSM-IV criterion A for PTSD (*i.e.*, had been exposed to a traumatic event and their response involved intense fear, helplessness, and/or horror). PTSD was diagnosed when respondents endorsed during at least 1 month (criterion E) at least 1 symptom within criterion B, at least 3 within criterion C, and at least 2 within criterion D, subsequent to the worst event they experienced that involved intense fear, helplessness, or horror, and the belief that they or someone close to them might die or be seriously injured or permanently disabled (Kessler et al., 1995; Pietrzak et al., 2011). PTSD diagnosis also required that the DSM-IV clinical significance criterion of impairment or distress (criterion F) be met (Pietrzak et al., 2011). Test-retest reliability of lifetime PTSD diagnoses was good (kappa=0.64) (Ruan et al., 2008).

Analyses for this study focused on the 17 DSM-IV PTSD symptoms. These symptoms are presented in Table 1. Only individuals who met DSM-IV criterion A for PTSD (i.e., had been exposed to a traumatic event and their response involved intense fear, helplessness, and/or horror) were included in our analyses, reflecting 14,632 women and 9,228 men.

Analyses

Comparing prevalence of PTSD symptoms

Sex differences in lifetime prevalence of each DSM-IV symptom of PTSD were tested using chi-square tests in both the full sample and the subsample of participants with a lifetime DSM-IV diagnosis of PTSD.

Assessing unidimensionality

Prior to IRT modeling, including testing for differential item functioning (DIF), it is necessary to confirm the unidimensionality of the set of symptoms, i.e., to assess whether all symptoms are part of the same underlying PTSD factor. Eigenvalue analysis of the tetrachoric correlation matrices of the 17 DSM-IV symptoms of PTSD (Table 1) was performed separately in women and men. A scree plot with an elbow after the first eigenvalue and a well-fitting one-factor model according to standard goodness of fit tests (RMSEA<.05, TLI>.95 and CFI>.95) were used to indicate unidimensionality.

Item response theory (IRT)

The IRT modeling was conducted to examine whether the DSM-IV symptoms of PTSD were endorsed similarly in women and men after adjusting for differences in underlying PTSD severity (Harford et al., 2013). A severity and a discrimination parameter are estimated for each symptom of PTSD indicating where along the latent severity continuum a symptom has a probability of 50% of being endorsed (for the severity parameter), and how rapidly the probability of observing the symptom changes across increasing levels of the latent severity continuum (for the discrimination parameter).

All factor analyses were conducted in Mplus Version 7.0 (Muthén and Muthén, 2007) which takes into account the NESARC sampling weights and design effects, in the parameter and standard error estimation as well as model fit calculations. The default estimator for the analysis was the variance adjusted weighted least squares (WLSMV), a robust estimator that does not assume normally distributed variables and provides the best option for modeling dichotomous observed variables such as the ones used in the present study (Muthén and Muthén, 2007).

Testing differential item functioning (DIF)

Multisample confirmatory factor analysis (MCFA) was used to test DIF across groups of (a) factor loadings (*i.e.,* item discrimination parameters) and (b) thresholds (*i.e.,* severity parameters). The different models varied in terms of the parameters constrained to be equal between groups (Millsap and Yun-Tein, 2004). Initially, an unconstrained model was fit allowing all parameters to differ between sexes (Table 2). Following a method previously described by McBride *et al.* (McBride et al., 2010), analyses were conducted iteratively to determine which IRT parameters differ between both groups. Nested models were compared using the chi-square difference test (implemented using the DIFFTEST option in Mplus (Muthén and Muthén, 2007). To detect DIF in IRT parameters of each item, the discrimination and severity parameters of the others items were constrained to be equal between groups. For each item, a chi-square difference test DIF comparing models with and without the discrimination parameter of the item constrained to be equal between groups was used to identify DIF in the discrimination parameter. To identify DIF in the severity parameter, a chi-square difference test DIF was used to compare models with and without the severity parameter of the item constrained to be equal between groups. Finally, Spearman's correlation coefficients were calculated to examine whether the ranking of IRT severity and discrimination parameters was similar between sexes (Peyre et al., 2014).

Small differences in severity between groups could be statistically significant but may not be clinically meaningful (Strong et al., 2009). To minimize the number of false positives that could derive from the multiple comparisons conducted in this study, we decided *a priori* that only differences greater than 0.25 in symptom discrimination and severity, would be considered as clinically meaningful and would be tested (Steinberg and Thissen, 2006). Such differences in symptom severity can be interpreted as one quarter of the "standard unit difference between the values of the (underlying) trait necessary to have a 50–50 chance of responding positively in one group compared to another" (Steinberg and Thissen, 2006). Because graphical display is helpful in placing the "effect sizes in a practical and theoretical context" (Wilkinson, 1999), we present the item response curves (IRC) for all symptom parameters that reached our *a priori* threshold of both statistical and clinical significance. Minimum sample size for DIF analyses is usually considered in the range of 100–200 subjects per group. Based on a simulation study, Scott *et al.* (Scott et al., 2010) recommended a minimum of 200 participants per group to ensure adequate performance (*i.e.,* 80% power).

Because PTSD symptom expression can be influenced by the type of traumatic exposure (Breslau and Kessler, 2001; Cloitre et al., 2009; Stein et al., 2000), we conducted these analyses in the full sample and in six subsamples according to major trauma types (i.e., "child maltreatment", "interpersonal violence", "war-related trauma", "other injury or shocking event", "learning of a trauma to a close friend or relative" and "learning of an unexpected death").

Results

Symptoms of PTSD endorsement rates

In the full sample, the prevalence rates of all PTSD symptoms and DSM-IV PTSD diagnosis were significantly higher in women compared to men (Table 1). In the subsample of participants with a DSM-IV diagnosis of PTSD, the prevalence rates of "anhedonia" and "feeling of detachment" were significantly higher in women compared to men, whereas "foreshortened future" was significantly more frequently endorsed in men than in women (all $p < .01$) (Table 1). PTSD severity was significantly higher in women compared to men (Cohen's $d = 0.38$ in the full sample and ranged from 0.11 (for "war-related traumas") to 0.97 (for "interpersonal violence") in subsamples) (Table 2).

Unidimensionality of symptoms of PTSD

In the full sample, fit indices indicated a very good fit of a single factor to the data (in men: first factor eigenvalue = 12.9, second factor eigenvalue = 1.1, CFI = 0.97, TLI = 0.97, RMSEA = 0.039; in women: first factor eigenvalue = 12.8, second factor eigenvalue = 1.0, CFI = 0.97, TLI = 0.97, RMSEA = 0.044). After stratifying by major trauma type, fit indices also indicated a good fit of a single factor to the data in the 6 subsamples (see Supplementary Table S1). We determined that these fit statistics were adequate to proceed to fitting IRT models.

IRT item parameters

In the full sample, the ranking of IRT parameters was similar between sex groups. Spearman's correlation coefficients were 0.97 for severity parameters (differences of rank ≤ 3) and 0.90 for discrimination parameters (differences of rank ≤ 10) (Table 2). In the 6 trauma type subsamples, the ranking of IRT parameters was similar between sex groups for severity parameters (mean Spearman's correlation coefficients were 0.95 (min = 0.87, max = 0.99)), and to a lesser extent for discrimination parameters (mean = 0.69, less than 0.80 for two trauma types, i.e., "child maltreatment" and "war-related trauma").

Differential item functioning

In the full sample, only one item out of 17 (i.e., "foreshortened future") reached our *a priori* threshold for statistical and clinical significance in symptom severity (Table 2). Visual inspection of the item response curves (IRC) for this item indicated that men were consistently more likely than women to experience a sense of a "foreshortened future" at equivalent levels of PTSD severity (Figure 1). For 3 out of 6 trauma types (i.e., "interpersonal violence", "learning of a trauma to a close friend or relative" and "learning of an unexpected death"), men were also more likely than women to experience a feeling of "foreshortened future" at equivalent levels of PTSD severity, in a clinically meaningful way (eFigures S1, S2 and S3). For the two trauma types "learning of a trauma to a close friend or relative" and "learning of an unexpected death", men were more likely than women to "avoid conversations, places and/or people" at equivalent levels of PTSD severity (eFigures S4 and S5). There were no other items for these trauma types that reached our *a priori* threshold for statistical and clinical significance or whose item response curves displayed graphically substantial differences (eFigures S6 to S10).

For the three other trauma types (i.e., "child maltreatment", "war-related trauma" and "other injury or shocking event"), there were no significant DIF in symptom severity and discrimination parameters between women and men.

Discussion

The aim of the current study was to evaluate sex differences in the likelihood of reporting DSM-IV PTSD symptoms in a nationally representative sample using an IRT-based methodology, while stratifying by major trauma type. The benefit of the IRT-based approach is that it accounts for the potential confounding effect of PTSD severity in evaluating potential sex differences in symptom expression. Additional strengths of the present study include (i) the use of a large nationally representative sample, (ii) the incorporation in our analyses of information from the sampling methods of the survey design which has been suggested to substantially improve standard error estimates and tests of model fit (Asparouhov, 2005), (iii) the use of an *a priori* defined threshold of clinical significance so that emphasis was placed on differences that can be considered substantively clinically meaningful, and (iv) the stratification of analyses by major trauma type.

To our knowledge, although two studies (He et al., 2014; Palm et al., 2009) examined the specific contribution of sex to the expression of PTSD symptoms in a general population

sample using IRT-based methodology, this study is the first to examine this issue while stratifying by major trauma type. Our findings suggest that the clinical presentation of PTSD symptoms does not differ substantially between women and men. Indeed, only one of the 17 PTSD symptoms (i.e., "foreshortened future") reached our criteria for both clinical and statistical significance in the full sample. Ranging in size from small to medium in magnitude (Steinberg and Thissen, 2006), the direction of association suggested that men were more likely than women to experience a feeling of "foreshortened future" at equivalent levels of PTSD severity in a clinically meaningful way. This difference was also found in three trauma type subsamples (i.e., "interpersonal violence", "learning of a trauma to a close friend or relative" and "learning of an unexpected death"), suggesting the robustness of this result. This finding, in line with those of two previous studies (He et al., 2014; Palm et al., 2009), suggests either a true sex difference in expression of PTSD or a sex-bias towards reporting this specific PTSD symptom. For example, while certain individuals may refer to a negative evaluation of what will happen in the future and are still able to distinguish past, present and future, others may experience an altered sense of time itself and temporal passage (Ratcliffe et al., 2014). As previously suggested (He et al., 2014; Palm et al., 2009), the interpretation of this item may vary by sex, supporting that a different severity cut-off score should be used in women and in men. This result also gives psychometric support to the exclusion of this symptom from the diagnostic criteria for PTSD in the DSM-5.

The symptom "avoid conversations/places/people" also reached our *a priori* threshold of both statistical and clinical significance for severity parameter in two trauma type subsamples (i.e., "learning of a trauma to a close friend or relative" and "learning of an unexpected death"). However, several lines of evidence argue against the clinical impact of this difference. First, there were no significant differences in severity parameter for this item in the full sample. Second, the sex differences in the ranking of the severity parameters for this symptom in the two subsamples were small (differences of rank   4). Last, the visual examination of the item response curves for the symptom "avoid conversations/places/people" in these two subsamples revealed a small nonuniform DIF (Figure S4 and S5), supporting that this difference is unlikely to be clinically meaningful.

Finally, we found that the prevalence rates of all PTSD symptoms as well as DSM-IV PTSD diagnosis were higher in women than in men. This finding is consistent with prior research derived from clinical or general population samples (Kawakami et al., 2014; Perkonigg et al., 2000; Pietrzak et al., 2011; Stein et al., 2000). Our results argue against the hypothesis that the higher prevalence of PTSD symptoms in women can be due to sex differences in the report of PTSD symptoms.

Our results should be interpreted in light of some limitations. A first limitation involves the retrospective nature of the assessment of PTSD symptoms that could have led to recall bias. Our findings should be further confirmed in national studies comparing prospectively PTSD symptoms by sex. Another limitation was that our sample size was too small to draw firm conclusions on sex differences in PTSD symptoms among individuals who experienced war-related traumas (Scott et al., 2010). Finally, our study examined specifically sex differences in the likelihood of reporting DSM-IV PTSD symptoms and the symptoms recently introduced in the DSM-5 (such as "persistent, distorted cognitions about the cause or

consequences of the traumatic event that lead the individual to blame himself/herself or others", "persistent negative emotional state (e.g., fear, horror, anger, guilt, or shame)" and "reckless or self-destructive behavior") were not available in NESARC.

Conclusion

Despite these limitations, by addressing several constraints of prior research and using IRT-based methods, the present study suggests that the clinical presentation of PTSD symptoms does not substantially differ between women and men after stratifying by major trauma type and equating for levels of PTSD severity. The only exception was the symptom "foreshortened future" that was more likely endorsed by men at equivalent levels of PTSD severity. These findings give additional psychometric support to the exclusion of this symptom from the diagnostic criteria for PTSD in the DSM-5.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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Highlights

Examining differences in PTSD symptoms, between females and males, at same level of PTSD severity.

US adult sample: the National Epidemiologic Survey on Alcohol and Related Conditions.

Use of Item Response Theory.

The clinical presentation of PTSD symptoms does not substantially differ between genders.

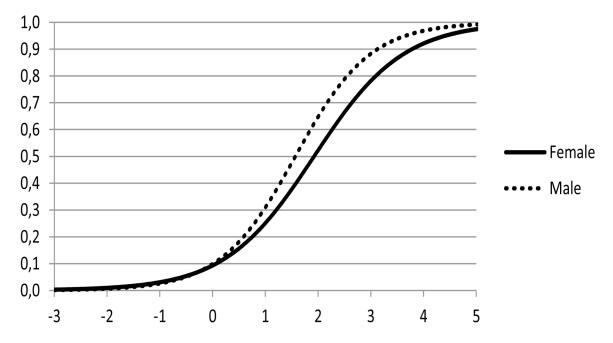The only exception was "foreshortened future", more likely endorsed by men but removed from DSM-5.

FIGURE 1.
Differences in the probability of endorsing the symptom "foreshortened future" across levels of PTSD severity between women and men in the full sample of individuals (N = 23,860).

TABLE 1

Prevalence of DSM-IV symptoms of post-traumatic stress disorder (PTSD) by sex in the full sample, and in the subsample of individuals with a DSM-IV diagnosis of PTSD.

DSM PTSD Symptoms	Full sample			Individuals with a DSM-IV diagnosis of PTSD		
	Women N = 14632	Men N = 9228	p-value	Women N = 2644	Men N = 977	p-value
	%	%		%	%	
Intrusive thoughts	75.1	63.3	**<0.001**	95.7	94.4	0.182
Nightmares	36.8	26.3	**<0.001**	78.2	73.9	0.036
Flashbacks	29.8	19.6	**<0.001**	69.7	64.8	0.020
Distress by reminders/thoughts	49.7	36.0	**<0.001**	89.9	87.3	0.076
Physiological reactivity	22.0	13.9	**<0.001**	63.0	56.6	0.017
Avoid thoughts	49.2	38.6	**<0.001**	88.4	88.0	0.743
Avoid conversations/places/people	33.6	27.6	**<0.001**	84.6	88.1	0.046
Memory lapses	15.8	11.7	**<0.001**	47.1	45.5	0.456
Anhedonia	22.5	14.0	**<0.001**	75.1	69.2	**0.009**
Feeling of detachment	20.5	12.5	**<0.001**	76.6	71.7	**0.010**
Emotionally numb	13.1	8.4	**<0.001**	56.8	58.3	0.534
Foreshortened future	7.1	5.6	**<0.001**	31.1	41.1	**<0.001**
Difficulty sleeping	32.6	20.0	**<0.001**	83.7	80.42	0.095
Irritability	18.6	13.0	**<0.001**	62.8	65.9	0.187
Difficulty concentrating	30.7	18.6	**<0.001**	82.6	78.6	0.035
Hypervigilance	31.2	25.8	**<0.001**	71.8	72.9	0.628
Exaggerated startle	17.3	10.9	**<0.001**	57.4	51.9	0.025
Diagnosis of PTSD	17.2	9.4	**<0.001**	-	-	-

Percentages are weighted values.

p-values in bold are statistically significant with p < .01.

TABLE 2

Differential item functioning (DIF) of DSM-IV post-traumatic stress disorder (PTSD) symptoms by sex in the full sample and for 6 major trauma types.

DSM PTSD Symptoms	Full sample Women: N=14632 Man: N=9228		Child maltreatment Women: N=406 Man: N=211		Interpersonal violence Women: N=1648 Man: N=490		War-related trauma Women: N=54 Man: N=588		Other injury or shocking event Women: N=4628 Man: N=3398		Learning of a trauma to a close friend or relative Women: N=4366 Man: N=2509		Learning of an unexpected death Women: N=3530 Man: N=2032	
	DIFa	DIFb	DIFa	DIFb	DIFa	DIFb	DIFa	DIFb	DIFa	DIFb	DIFa	DIFb	DIFa	DIFb
Intrusive thoughts	−0,01	−0,13	−0,34	−0,35	−0,20	−0,11	0,27	0,37	−0,03	−0,16	−0,05	−0,08	0,09	−0,20
Nightmares	−0,04	0,00	−0,24	0,09	−0,38	−0,02	−0,36	0,32	−0,04	0,01	−0,06	−0,04	0,00	−0,08
Flashbacks	−0,09	−0,01	−0,35	−0,05	−0,36	0,20	−0,03	0,29	−0,02	−0,05	**−0,27***	0,09	−0,05	−0,18
Distress by reminders/thoughts	0,05	−0,09	−0,30	−0,01	−0,26	0,10	2,98	0,00	0,13	−0,07	−0,05	−0,08	0,12	−0,24
Physiological reactivity	0,03	−0,04	−0,40	−0,05	−0,10	0,00	0,62	0,14	0,11	−0,04	−0,15	0,08	0,08	−0,13
Avoid thoughts	−0,11	0,00	−0,16	0,07	**−0,35***	−0,29	1,88	0,29	−0,16	−0,03	−0,07	−0,03	−0,17	0,07
Avoid conversations/places/people	−0,05	0,17	−0,34	−0,19	**−0,40***	−0,19	−0,02	0,12	−0,09	0,08	0,02	**0,31****	−0,18	**0,36****
Memory lapses	0,04	0,00	−0,06	0,01	−0,13	0,14	−0,19	0,86	0,10	0,00	−0,06	0,04	0,03	−0,13
Anhedonia	0,09	−0,08	−0,03	0,28	−0,44	0,32	1,70	−0,77	0,09	−0,01	0,13	−0,14	0,12	−0,09
Feeling of detachment	0,08	−0,02	−0,21	0,02	−0,67	0,06	0,54	−0,11	0,12	0,03	0,09	0,03	−0,07	0,09
Emotionally numb	−0,02	0,09	−0,94	0,23	−0,62	0,06	2,53	−0,26	−0,01	0,18	0,23	0,08	−0,08	**0,31****
Foreshortened future	−0,23	**0,35****	−1,62	0,63	−0,17	**0,52***	3,56	−0,54	−0,28	0,32	−0,07	**0,32****	−0,04	**0,35****
Difficulty sleeping	−0,08	−0,09	−0,01	0,12	−0,04	−0,06	−0,45	−0,32	0,19	−0,08	0,01	−0,15	−0,19	−0,15
Irritability	−0,04	0,10	−0,90	0,21	−0,26	0,14	0,24	−0,36	−0,04	0,16	0,05	0,05	**−0,29***	**0,30***
Difficulty concentrating	0,03	−0,12	−0,62	−0,07	−0,60	0,06	1,29	−0,44	0,17	−0,20	0,10	−0,07	−0,15	0,02
Hypervigilance	0,04	0,10	−0,19	−0,22	−0,08	0,13	−0,24	−0,11	0,03	0,05	−0,05	0,22	−0,03	0,23
Exaggerated startle	0,08	−0,04	−0,01	−0,24	−0,22	−0,02	−0,22	0,31	0,00	−0,09	−0,03	−0,07	0,05	−0,11
Spearman correlation	0,82	0,98	0,50	0,97	0,85	0,97	0,27	0,87	0,81	0,99	0,87	0,96	0,86	0,94
Cohen's d (Man vs. Woman)	−0,381		−0,174		−0,966		−0,111		−0,201		−0,380		−0,475	

Note: a = discrimination parameter estimate, b = severity parameter estimate.

Values in bold are statistically (*p < .05, **p < .01) and clinically significant (DIF > .25) (method described in the article).

Sampling weights and design effects of the NESARC were taken into account.

DIFFTEST a = comparing models with the factor loading free and fixed for the corresponding item.

DIFFTEST b = comparing models with the threshold respectively free and fixed for the corresponding it