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## The Epidemiology of DSM-5 Posttraumatic Stress Disorder in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions-III

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### Abstract

**Objective**—To present current, nationally representative U.S. findings on the past-year and lifetime prevalences, sociodemographic correlates, psychiatric comorbidity, associated disability, and treatment of DSM-5 posttraumatic stress disorder (PTSD).

**Method**—Face-to-face interviews with 36,309 adults in the 2012–2013 National Epidemiologic Survey on Alcohol and Related Conditions–III. PTSD, alcohol and drug use disorders, and selected mood, anxiety, and personality disorders were assessed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule–5.

**Results**—Past-year and lifetime prevalences were 4.7% and 6.1%, higher for female, white, Native American, younger, and previously married respondents, those with < high school

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#### Disclaimer:

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#### CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

#### ETHICAL STANDARD

The institutional review boards of the National Institutes of Health and Westat, Inc., have reviewed the research protocol and provided full ethical approval. Therefore, all procedures performed in this study were in accordance with the ethical standards laid down in the 1964 declaration of Helsinki and its later amendments.

education and lower incomes, and rural residents. PTSD was significantly associated with a broad range of substance use, mood, anxiety, and personality disorders, and past-month disability. Among respondents with lifetime PTSD, 59.4% sought treatment; an average of 4.5 years elapsed from disorder onset to first treatment.

**Conclusions**—DSM-5 PTSD is prevalent, highly comorbid, disabling, and associated with delayed help seeking. Additional research is needed to elucidate relationships identified herein, estimate PTSD-related costs, investigate hypotheses regarding etiology, course, and treatment, and support decisions about resource allocation to service delivery and research. Initiatives are needed to destigmatize PTSD, educate the public about its treatment, and encourage affected individuals to seek help.

### Keywords

posttraumatic stress disorder; epidemiology; comorbidity

## INTRODUCTION

Posttraumatic stress disorder (PTSD) is characterized by intrusive, involuntary, distressing remembering or reexperiencing, avoidance, negative alterations in cognitions and mood, and changes in arousal and reactivity following direct experience, witnessing, repeated or extreme exposure to aversive details, or learning of the occurrence to a close other of actual or threatened death, serious injury, or sexual violence. The most recent nationally representative PTSD prevalence estimates from the United States, based on *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (DSM-IV)* [1] criteria, were 3.5% (past-year) [2] and 6.4% to 6.8% (lifetime) [3–5]. Past-year prevalence estimates of DSM-IV PTSD from nationally representative general population surveys of other high-income Western countries included: 0.4% in Spain, 0.5% in Germany, 0.6% in Belgium, 1.2% in the Netherlands, 1.4% in France, 2.1% in New Zealand, and 3.8% in Northern Ireland [6]; and 1.3%–1.5% in Australia [7, 8]. Lifetime estimates included 2.9% in Germany [9], 5.6% in Sweden [10], 7.8% in the Netherlands [11], 8.8% in Northern Ireland [12], and 9.2% in Canada [13]. The wide cross-national variability in prevalence estimates over both time frames reflects factors including differences in sampling design, assessment methodology, and historical context, e.g., the long period of conflict in Northern Ireland during the late 20<sup>th</sup> century [12]. Cross-national differences in exposure to traumatic events [10, 13], distributions of preexisting vulnerability factors, e.g., chronologically primary psychiatric disorders [7], propensity to appraise, react to, and report events as traumatic [9], and availability of both formal (e.g., health and social services) and informal supports to buffer the effects of stressful events may also contribute. Sociodemographic correlates of PTSD in general population samples have included female sex, young age, previously married status, and low income [3, 4, 7, 14].

DSM-IV PTSD was associated with elevated odds of comorbid lifetime drug use disorders (DUDs, odds ratio [OR]=1.3) nicotine dependence (OR=1.3), mood (ORs=1.4–2.7), other anxiety (OR=1.3–1.9), schizotypal, narcissistic, and borderline personality disorders (PDs; ORs = 2.1–2.5), and suicide ideation and attempts (ORs = 1.8–2.0) [3, 4, 15–17]. It was also associated with substantial burden through impairment in major life roles [4, 18–20];

common chronic medical conditions including cardiovascular disease, arthritis, asthma, chronic pain, diabetes, bone and joint conditions, and gastrointestinal disorders [20–23]; and high rates of health service utilization [24, 25].

These findings reflect data collected >10 years ago. The definition of PTSD underwent substantial revision in the *Diagnostic and Statistical Manual of Mental Disorders–Fifth Edition (DSM-5)* [26–28]. Classified as an anxiety disorder under DSM-IV, PTSD was moved into the new category of trauma- and stressor-related disorders in DSM-5. Under DSM-IV, but not DSM-5, PTSD could be diagnosed in individuals only exposed (e.g., to the events of September 11, 2001) while watching the news on television. In addition, events experienced by others are now qualifying exposures only if they befall relatives or close friends, and deaths of close others must be violent or accidental. DSM-IV Criterion A2 (intense fear, helplessness, or horror) has been eliminated and the avoidance/numbing symptom cluster has been subdivided into avoidance (Criterion C) and persistent negative alterations in mood and cognitions (Criterion D). Further, symptoms of irritability, angry outbursts, and reckless or self-destructive behavior have been added under Criterion E (alterations in arousal and reactivity).

In view of the burdens of psychiatric and general comorbidity, medical care utilization, and functional impairment and disability associated with PTSD, and the considerable changes in its diagnostic definition under DSM-5, current, nationally representative epidemiologic data from a single, uniform source are urgently needed. This is particularly true because recent changes in population composition and historical context, including global terrorism, protracted wars in Iraq and Afghanistan, and their consequences, may be associated with changes both in PTSD prevalence and in relationships of PTSD to sociodemographic characteristics, disability, and help seeking. In addition, revisions under DSM-5 to diagnostic definitions of disorders with which PTSD co-occurs may be associated with changes in patterns and magnitudes of comorbidity. There is thus a critical need for up-to-date national information from which to estimate economic and noneconomic burdens of PTSD, generate hypothesis-driven etiologic, nosologic, natural history, and treatment studies, and inform the allocation of resources to service provision and research.

Accordingly, we report the first nationally representative findings on prevalences, sociodemographic correlates, psychiatric comorbidity, disability, and treatment of DSM-5 PTSD from the 2012–2013 National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III) [29].

## METHODS

### Sample

As described in detail elsewhere, the NESARC-III's target population comprised civilian, noninstitutionalized residents aged 18 years of U.S. households and selected group quarters [29]. Counties or groups of contiguous counties comprised primary sampling units; groups of Census-defined blocks, secondary sampling units (SSUs); and households within sampled SSUs, from which eligible respondents were selected, tertiary sampling units. Black, Asian, and Hispanic individuals were assigned higher selection probabilities than nonminority

household members. In households (n=1661) with 4 eligible minority adults, 2 respondents were selected. Data were adjusted for nonresponse and weighted to reflect the U.S. civilian population based on the 2012 American Community Survey [30]. These weighting adjustments compensated adequately for nonresponse [31]. Total sample size was 36,309, reflecting a household response rate of 72%, a person-level rate of 84%, and an overall rate of 60.1%, similar to other recent U.S. national surveys [32, 33]. All respondents provided informed consent. The entire research protocol was approved by the institutional review boards of the National Institutes of Health and Westat, Inc. Respondents received \$90.00 for their interview participation.

## Assessments

The diagnostic interview was the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule-5 (AUDADIS-5) [34], designed to measure DSM-5 PTSD, alcohol (AUD) and nicotine (NUD) use disorders, specific DUDs, and selected mood, anxiety, eating, and personality disorders (PDs).

**Posttraumatic Stress Disorder**—Respondents were queried about 19 potentially traumatic events (PTEs) they may have directly experienced, and 13 that they may have witnessed or learned about, or to whose details they may have been repeatedly exposed as the events befell others. An AUDADIS-5/DSM-5 PTSD diagnosis required 1 event; respondents reporting >1 event were assessed for remaining PTSD criteria concerning the event they nominated as their worst trauma. Respondents had to report 1 symptom of persistent intrusion (Criterion B), 1 of avoidance of stimuli (Criterion C), and 3 each of negative mood or cognitive changes (Criterion D) and increased arousal (Criterion E) [35], following the event, yielding a relatively narrow diagnostic definition. Respondents further had to report duration of 1 month and clinically significant impairment or distress. Past-year and prior-to-the-past-year diagnoses were combined into a lifetime measure. Test-retest reliability of past-year and prior-to-the-past-year PTSD diagnoses was fair ( $\kappa=0.41$  and  $0.44$ , respectively); reliability of the dimensional PTSD criteria scale was good (intraclass correlation coefficient [ICC]= $0.69$ ) [36]. Procedural validity, assessed as concordance between the AUDADIS-5 and the semistructured, clinician-administered Psychiatric Research Interview for Substance and Mental Disorders, DSM-5 version (PRISM-5) [37] in a large general population sample, was fair to moderate across time frames ( $\kappa=0.34$ – $0.46$ ); concordance of dimensional criteria scales between the instruments was good (ICC= $0.69$ ) [38].

**Other Psychiatric Disorders**—Mood disorder diagnoses included primary major depressive (MDD), dysthymia/persistent depressive, and bipolar I. Anxiety disorders included primary panic, agoraphobia, social and specific phobias and generalized anxiety (GAD). Primary AUDADIS-5/DSM-5 mood and anxiety diagnoses excluded substance- and medical illness-induced cases. In addition to mood and anxiety disorders, anorexia nervosa, bulimia nervosa, and binge-eating disorder and antisocial, schizotypal and borderline PDs were assessed.

Diagnostic criteria for AUD, NUD, and 10 specific categories of DUDs were operationalized in extensive AUDADIS-5 questions. Specific DUD diagnoses were aggregated to yield any past-year and any lifetime DUD. Consistent with DSM-5, lifetime AUD, NUD, and DUD diagnoses required 2 of 11 criteria related to the same substance either in or prior to the past year. Prior-to-past-year diagnoses required clustering of 2 criteria for the same substance in the same year.

As detailed elsewhere [36], test-retest reliability of AUDADIS-5 diagnoses and symptom scales in a large general population sample was mainly fair to excellent. Procedural validity, assessed as concordances between AUDADIS-5 and PRISM-5 diagnoses, were mostly fair to good; between their dimensional criteria scales, mainly good to excellent [38, 39].

**Disability**—Past-month disability was assessed with the 12-Item Short Form Health Survey, version 2 (SF-12 v2) [40], a reliable and valid measure widely used in population surveys. SF-12 v2 scales included in this study were Mental Component Summary (MCS), Social Functioning, Role Emotional Functioning, and Mental Health. Each has a score mean of 50, standard deviation of  $\pm 10$ , and a range of 0–100, lower scores indicating greater disability.

### Statistical Analysis

All analyses utilized SUDAAN, version 11.0 [41], to account for the NESARC-III's complex sample design. We estimated prevalences of lifetime exposures to specific PTEs, identification of particular events as worst traumas among respondents reporting any exposures, and PTSD by sociodemographic correlates using weighted percentages, and computed weighted means for continuous correlates of PTSD. We compared prevalences of events by PTSD status and sex using  $\chi^2$  statistics with 1 degree of freedom. ORs obtained from multivariable logistic regressions estimated associations of PTSD with each sociodemographic characteristic, adjusted for all others. We estimated associations with psychiatric comorbidity using logistic regressions that adjusted for sociodemographic characteristics and all other substance use and psychiatric disorders, testing the hypothesis that PTSD is associated with pure (non-comorbid) forms of other disorders of interest. Eating disorders were too rare to assess comorbid associations with PTSD, but were adjusted for in comorbidity analyses. We assessed relationships of past-year PTSD to SF-12 v2 scales using normal-theory regression. Regression ( $\beta$ ) coefficients estimate associations of past-year PTSD with SF-12 v2 scale scores, adjusted for sociodemographic characteristics and additional past-year psychiatric comorbidity.

## RESULTS

### Prevalence, Onset, and Sociodemographic Correlates

Past-year and lifetime prevalences ( $\% \pm SE$ ) of PTSD were  $4.7\% \pm 0.17$  and  $6.1\% \pm 0.21$ , respectively, with mean age  $\pm SE$  at first onset  $23.7 \pm 0.38$  years. Table 1 shows prevalences and ORs of PTSD by sociodemographic characteristics. Odds were significantly elevated in women, respondents who self-identified as Native Americans versus non-Hispanic whites, respondents aged  $<65$ , and those previously married, with  $<$ high school education, and with

family incomes <\$70,000. PTSD was significantly less prevalent among self-identified non-Hispanic Black, Asian/Pacific Islander, and Hispanic respondents, and Midwestern and urban residents.

### Lifetime Trauma Histories and Most Stressful Events

In the total sample, 68.6% of respondents reported ≥ 1 PTE. Almost all queried events were reported significantly more frequently by respondents with than without PTSD (Table 2). Respondents with PTSD most commonly reported, in descending order of frequency, sexual abuse before age 18, seeing a dead body or body parts, victimization by intimate partner violence (IPV), own serious or life-threatening injury, and own serious or life-threatening illness. As shown in Supplementary eTable 1, men with PTSD were significantly more likely than women with PTSD to report own serious injury, seeing a dead body, injury in a terrorist attack, non-IPV physical assault, being mugged, combat, being a civilian in a war zone, juvenile incarceration, and exposure to someone else's serious injury, kidnapping, and seeing a dead body. Women with PTSD were significantly more likely than men with PTSD to report sexual abuse before age 18, sexual assault in adulthood, physical abuse before age 18, IPV victimization, being stalked, and exposure to someone else's sexual assault in adulthood and someone else being stalked. Among respondents without PTSD, 66.5% reported ≥ 1 event, most commonly someone else's serious illness, seeing a dead body, own serious illness, someone else's serious injury, and own serious injury.

Percentages of respondents reporting any PTEs who identified specific events as their worst traumas are given in Table 3. Respondents with PTSD most commonly endorsed, in descending order, sexual abuse before age 18, IPV victimization, seeing a dead body, someone else's serious injury, and own serious injury. Those without PTSD most commonly endorsed someone else's serious illness, seeing a dead body, own serious illness, someone else's serious injury, and own serious injury. Respondents with PTSD were significantly more likely than those without to nominate sexual abuse before age 18, sexual assault in adulthood, physical abuse before age 18, IPV victimization, being stalked, and combat, but less likely to endorse own serious illness, seeing a dead body, natural disaster, being mugged, serving as a peacekeeper, refugee status, or being exposed to adversities befalling others, including: someone else's serious injury, serious illness, injury in a terror attack, natural disaster, sexual abuse before age 18, IPV victimization, non-IPV physical assault, kidnapping, and mugging. As shown in Supplementary eTable 1, men with PTSD were significantly more likely than women with PTSD to endorse own serious injury, own serious illness, seeing a dead body, combat, juvenile incarceration, and someone else's serious illness, but women with PTSD were significantly more likely than men with PTSD to endorse sexual abuse before age 18, sexual assault in adulthood, IPV victimization, and being stalked.

### Comorbidity

After adjustment for sociodemographic and diagnostic covariates, associations were statistically significant and positive with all examined past-year and lifetime disorders (ORs=1.2–3.3) except past-year AUD (Table 4). Associations were strongest with borderline and schizotypal PDs.

## Disability and Treatment Utilization

Mean±SE MCS, Social Functioning, Role Emotional Functioning, and Mental Health scores on the SF12- v2 for respondents with versus without past-year PTSD are shown in Table 5. Unadjusted mean scores were 9 (Role Emotional) to 10 (Social Functioning, Mental Health, and MCS) points lower among respondents with than among those without PTSD. After adjustment for sociodemographics and additional past-year psychiatric comorbidity, differences by PTSD status were highly significant ( $\beta=-3.2$  to  $-3.8$ , all  $p$ s  $< 0.001$ ). Among respondents with lifetime PTSD, 59.4% reported any treatment, most commonly (54.6%) talking with a health care provider, counselor, or therapist, or prescribed medication (33.7%); self-help and support groups (17.2%), emergency department visits (11.7%) and inpatient hospitalizations (10.9%) were less frequent. Among help seekers, mean±SE age at first treatment was  $28.2\pm 0.57$  years, reflecting a 4.5-year average lag from first onset of PTSD.

## DISCUSSION

Past-year (4.7%) and lifetime (6.1%) prevalences of DSM-5 PTSD represent 10,972,986 and 14,411,005 affected U.S. adults, respectively. Broadly consistent with previous findings [3, 4, 42, 43], prevalences were higher among women and respondents aged  $< 65$  years, previously married, and with  $<$ high school education and household income  $< \$70,000$ . Rates were also higher among Native American, but lower among Asian and Pacific Islander and Hispanic, versus non-Hispanic white, respondents, and lower among urban than rural residents. Past-year PTSD was less likely among Midwestern than Western residents. Taken together, these results indicate the need to characterize risk and protective factors, and underlying mechanisms, related to sociodemographic characteristics to improve understanding of the etiologies of both exposure to PTEs and PTSD and tailor prevention and intervention appropriately to subgroups at risk [3, 43].

In the total NESARC-III sample, lifetime prevalence of PTE exposure (68.6%) was higher than reported by Kessler et al. [42] based on DSM-III-R criteria, but lower than those in recent studies [3, 22, 44, 45] based on DSM-IV, including Wave 2 of the NESARC. These differences likely reflect the broader range of qualifying events in DSM-IV than DSM-III-R or DSM-5. Nevertheless, rank-orderings of the most common exposures, particularly among respondents with PTSD, and differences by sex, were generally similar to those reported previously [4, 42–44].

Respondent-reported worst traumas showed somewhat less consistency with previous results. Pietrzak et al. [4] found that respondents with DSM-IV PTSD most often reported serious illness or injury and unexpected death of someone close, sexual assault, seeing a dead body, and military combat as their worst events; those without PTSD, these 2 events, indirect experience of September 11, 2001 (e.g., television or radio broadcast), seeing a dead body, and own serious injury. Again, these divergences may reflect the tightening of Criterion A under DSM-5. Sex differences in endorsement among respondents with PTSD likewise reflected both convergence with (combat, seeing a dead body, own serious injury, sexual assault, and IPV victimization) and divergence from (own and someone else's serious illnesses, being stalked, someone else's serious illness or injury) previous findings [4].

Taken together, the present results are consistent with previous findings that assaultive trauma, including IPV and sexual abuse or assault, confers particularly high risk for PTSD [42, 46, 47], possibly reflecting potential for physical injury, self-blame, and social stigma [48–50]. Further, higher prevalences and endorsement as worst trauma of childhood sexual abuse, which commonly co-occurs with numerous other early-life adversities [51, 52], versus later sexual assaults are compatible with evidence that early trauma and cumulative adversity are associated with increased risk of PTSD following later trauma [53–56]. The present findings on the frequency with which respondents, particularly those with PTSD, reported serious illness and injury befalling others as traumatic events add to the evidence that indirect trauma exposure is associated with the development of PTSD [4, 57, 58].

After adjustment for sociodemographic and diagnostic covariates, and despite many changes in diagnostic definitions under DSM-5, associations of both 12-month and lifetime PTSD with substance use, mood, anxiety, and PD comorbidity were remarkably similar to those observed for lifetime DSM-IV PTSD by Pietrzak et al. [4, 15]. Stronger associations with adjustment only for sociodemographic characteristics (data not shown) suggest that factors common to PTSD and comorbid disorders partly explain the magnitudes of the associations. However, persistence of significant relationships after adjustment for additional comorbidity suggests important, unique disorder-specific contributors. These results, along with findings from previous epidemiologic [3, 4, 15, 59, 60] and genetic studies [61, 62], call for further study of factors underlying comorbidity with PTSD.

Past-year PTSD was significantly associated with all domains of disability as assessed by the SF-12 v2 scales examined in this study, reflecting broadly ranging impairment in functioning even after sociodemographic characteristics and additional past-year psychiatric comorbidity were taken into account. Together with its substantial comorbidity, these findings highlight the clinical and public health significance of PTSD, and suggest that treatment interventions may need to address impairment in functioning across multiple domains in addition to PTSD symptomatology. Six in 10 respondents with lifetime PTSD reported treatment, most commonly counseling with a professional or prescribed medication, but with an average delay of 4.5 years following disorder onset. Contributors to this delay may include stigma, insurance coverage concerns, clinical complexity related to comorbidity such as MDD and substance use disorders, and difficulties in diagnosis reflecting symptom overlap of PTSD with disorders such as MDD and medical illnesses characterized by autonomic arousal [63]. Because early identification and treatment are important in improving clinical outcomes [64] and the most common treatment providers in this study included health professionals, these clinicians may play vital roles in identifying and connecting affected individuals to appropriate help.

Empirical support is growing for psychological PTSD treatments including prolonged exposure, cognitive processing, and eye movement desensitization and reprocessing therapies [63, 65]. Empirical support is also growing for pharmacotherapies including fluoxetine, paroxetine, sertraline, topiramate, and venlafaxine [65–67]. To date, screening for PTSD has not been shown to improve overall health outcomes [64, 68, 69]. Nevertheless, identifying and addressing trauma and its consequences are essential components of good clinical practice. Beyond improving clinical outcomes of PTSD, prompt identification and



appropriate management, including provision of or referral to evidence-based treatments when indicated, may mitigate adverse impacts of PTSD on health risk behaviors and treatment adherence for both PTSD and its comorbidities [63, 68, 70–72].

Study limitations include the NESARC-III's cross-sectional design. Prospective investigations are needed to assess stability of prevalence estimates over time, clinical course of PTSD, and predictors thereof. Furthermore, the NESARC-III's target population comprised civilian residents, including veterans, of households and selected group quarters. By excluding individuals currently on active military duty and those institutionalized in prisons or psychiatric facilities, it may have underrepresented those most likely to have high levels of trauma exposure or PTSD, leading to some underestimation of prevalences.

The narrow definition of PTSD in this study might also have missed some relatively mild cases, possibly underestimating prevalences and biasing associations with sociodemographic and clinical correlates. To examine this potential concern, we reanalyzed lifetime prevalence, sociodemographic correlates, PTE exposures, worst events, and psychiatric comorbidity, as well as past-month disability with adjustment for lifetime rather than 12-month psychiatric diagnostic covariates using a broad definition of PTSD. Under that definition, respondents were classified as having lifetime PTSD if they met DSM-5 Criteria A through E ( 2 symptoms each required for Criteria D and E), with or without duration of 1 month and with or without impairment or distress. Although the prevalence of broadly defined lifetime PTSD was considerably higher ( $10.7\% \pm 0.27$ ), the directions and magnitudes of associations with specific events, sociodemographic characteristics, lifetime comorbidity, and disability did not differ between narrowly and broadly defined PTSD.

An additional consideration involves assessment of PTSD based on worst trauma, versus assessment based on both the worst and another, randomly selected event [14, 47]. Respondents may not have defined their worst trauma uniformly, and using the worst event might overestimate PTSD prevalence. Nevertheless, the upward bias in worst event-based prevalence estimates is modest [14], and associations with key clinical characteristics are comparable to random event-based assessments. The worst-event approach is thus appropriate for assessment of trauma-related symptomatology when separate assessments for 2 events are infeasible [14].

Despite these limitations, the NESARC-III is the first epidemiologic survey of DSM-5 psychopathology in U.S. adults. Based on a large, nationally representative sample, it provides current, comprehensive information on a wide range of common mental disorders, incorporates well-validated measures of functioning, and includes detailed characterization of help seeking. An additional strength to be drawn upon in future investigations is the availability of genetic data from a subsample of NESARC-III respondents. The present paper lays important groundwork for future studies utilizing the genetic data.

In conclusion, consistent with studies based on prior diagnostic systems, NESARC-III findings identify DSM-5 PTSD as a prevalent, highly comorbid, and disabling condition affecting millions of Americans and associated with long delays in treatment seeking. Studies can now characterize in greater detail the broad relationships, including sex

differences in trauma exposures and PTSD prevalence, identified herein, estimate current social and economic costs of PTSD, investigate hypotheses about etiology, course, and treatment utilization, and inform policy decisions about resource allocation to service provision and research. Present findings reinforce the need to destigmatize PTSD, educate the public, clinicians, and policymakers about its seriousness and the availability of effective treatments, and encourage more individuals with the disorder to seek help.

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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**Table 1**

Prevalences, % (SE), and Odds Ratios (95% Confidence Intervals)<sup>a,b</sup> of 12-Month and Lifetime DSM-5 Posttraumatic Stress Disorder by Sociodemographic Characteristics

	12-month		Lifetime (% SE)	
	Prevalence, % (SE)	OR (95% CI)	Prevalence, % (SE)	OR (95% CI)
Total	4.7 (0.17)		6.1 (0.21)	
Sex				
Male	3.2 (0.18)	<b>0.5</b> (0.46–0.61)	4.1 (0.20)	<b>0.5</b> (0.45–0.57)
Female	6.1 (0.27)	1.0 (Referent)	8.0 (0.31)	1.0 (Referent)
Race/ethnicity				
White	4.8 (0.24)	1.0 (Referent)	6.3 (0.29)	1.0 (Referent)
Black	4.7 (0.35)	<b>0.8</b> (0.62–0.94)	6.2 (0.42)	<b>0.8</b> (0.64–0.92)
Native American	12.9 (1.88)	<b>2.1</b> (1.47–3.06)	16.2 (2.08)	<b>2.1</b> (1.53–2.95)
Asian/Pacific Islander	1.8 (0.42)	<b>0.3</b> (0.22–0.57)	2.3 (0.46)	<b>0.3</b> (0.22–0.51)
Hispanic	4.2 (0.27)	<b>0.7</b> (0.55–0.78)	5.6 (0.30)	<b>0.7</b> (0.58–0.79)
Age, y				
18–29	5.4 (0.37)	<b>3.5</b> (2.71–4.61)	6.6 (0.40)	<b>2.8</b> (2.27–3.37)
30–44	5.7 (0.32)	<b>4.0</b> (3.20–5.09)	7.1 (0.39)	<b>3.2</b> (2.69–3.86)
45–64	4.7 (0.19)	<b>3.0</b> (2.40–3.70)	6.6 (0.29)	<b>2.7</b> (2.30–3.25)
65	2.2 (0.22)	1.0 (Referent)	3.2 (0.25)	1.0 (Referent)
Marital status				
Married/cohabiting	3.7 (0.18)	1.0 (Referent)	5.1 (0.24)	1.0 (Referent)
Widowed/separated/divorced	6.7 (0.35)	<b>1.7</b> (1.44–1.90)	8.5 (0.45)	<b>1.5</b> (1.26–1.68)
Never married	5.3 (0.36)	1.1 (0.90–1.31)	6.7 (0.39)	1.1 (0.91–1.25)
Education				
Less than high school	5.9 (0.39)	<b>1.2</b> (1.05–1.48)	7.7 (0.43)	<b>1.3</b> (1.08–1.48)
High school	4.6 (0.27)	0.9 (0.81–1.10)	6.2 (0.30)	1.0 (0.88–1.13)
Some college or higher	4.4 (0.20)	1.0 (Referent)	5.7 (0.23)	1.0 (Referent)
Family income, \$				
0–19,999	7.0 (0.36)	<b>2.3</b> (1.87–2.73)	9.0 (0.37)	<b>2.2</b> (1.86–2.61)
20,000–34,999	5.1 (0.30)	<b>1.7</b> (1.44–2.11)	6.6 (0.41)	<b>1.7</b> (1.38–2.04)
35,000–69,999	4.4 (0.26)	<b>1.5</b> (1.28–1.79)	5.9 (0.29)	<b>1.5</b> (1.29–1.76)
70,000	2.9 (0.19)	1.0 (Referent)	3.9 (0.26)	1.0 (Referent)
Urbanicity				
Urban	4.4 (0.16)	<b>0.8</b> (0.67–0.97)	5.8 (0.19)	<b>0.8</b> (0.71–0.99)
Rural	5.6 (0.46)	1.0 (Referent)	7.3 (0.54)	1.0 (Referent)
Region				
Northeast	5.0 (0.41)	1.0 (0.85–1.25)	6.1 (0.45)	1.0 (0.81–1.14)
Midwest	4.3 (0.40)	<b>0.8</b> (0.62–0.97)	5.9 (0.46)	0.8 (0.69–1.01)

	12-month		Lifetime (% SE)	
	Prevalence, % (SE)	OR (95% CI)	Prevalence, % (SE)	OR (95% CI)
South	4.7 (0.32)	0.8 (0.70–1.01)	6.3 (0.39)	0.9 (0.76–1.04)
West	4.8 (0.21)	1.0 (Referent)	6.1 (0.28)	1.0 (Referent)

<sup>a</sup>Odds ratios are derived from a single logistic regression model into which all sociodemographic variables were entered simultaneously.

<sup>b</sup>Significant ORs ( $p < 0.05$ ) are given in **boldface**.

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**Table 2**

Prevalences, % (SE) of Potentially Traumatic Exposures by PTSD Status

Event	PTSD (n = 2339)	No PTSD (n = 33,970)	$\chi^2$ (1 d.f.)	p-value
<i>Directly experienced by respondent</i>				
Serious or life-threatening injury	21.2 (1.03)	10.6 (0.29)	95.71	<0.001
Serious or life-threatening illness	21.1 (1.08)	12.7 (0.28)	51.38	<0.001
Seeing dead body or body parts	29.3 (1.14)	18.0 (0.35)	89.32	<0.001
Injury in a terrorist attack	1.1 (0.27)	0.4 (0.05)	5.74	0.017
Natural disaster	11.8 (0.97)	9.5 (0.53)	5.20	0.023
Sexual abuse before age 18	34.2 (1.06)	6.2 (0.18)	403.43	<0.001
Sexual assault in adulthood	12.2 (0.78)	1.6 (0.09)	145.19	<0.001
Physical abuse before age 18	16.7 (0.89)	2.9 (0.12)	175.46	<0.001
Victimization by intimate partner violence	22.6 (1.06)	4.7 (0.16)	239.67	<0.001
Physical assault by someone else	9.6 (0.79)	4.0 (0.13)	54.03	<0.001
Kidnapping or being held hostage	2.4 (0.43)	0.5 (0.04)	20.55	<0.001
Stalking	8.6 (0.58)	2.1 (0.09)	89.53	<0.001
Being mugged, held up, threatened with weapon	10.4 (0.93)	5.1 (0.16)	32.82	<0.001
Active military combat	6.2 (0.60)	2.4 (0.13)	40.29	<0.001
Service as peacekeeper, relief worker	0.7 (0.18)	0.4 (0.04)	3.25	0.072
Being a civilian in a war zone, place of terror	1.8 (0.35)	0.5 (0.05)	12.86	<0.001
Refugee status	0.5 (0.17)	0.3 (0.05)	0.94	0.333
Prisoner of war status	0.2 (0.10)	0.2 (0.03)	0.36	0.546
Incarceration in juvenile detention or jail	6.5 (0.66)	2.9 (0.13)	27.95	<0.001
Another traumatic event	4.9 (0.52)	1.6 (0.10)	39.04	<0.001
<i>Experiences of others that respondent witnessed or learned about, or to the details of which respondent was repeatedly exposed</i>				
Someone else's serious or life-threatening injury	16.8 (1.03)	12.2 (0.32)	18.11	<0.001
Someone else's serious or life-threatening illness	19.1 (1.10)	18.4 (0.45)	0.54	0.463
Someone else's injury in a terrorist attack	7.6 (0.63)	5.6 (0.19)	8.41	0.004
Someone else exposed to natural disaster	2.7 (0.48)	1.4 (0.09)	6.93	0.009
Someone else's sexual abuse before age 18	6.3 (0.79)	5.8 (0.29)	0.39	0.534
Someone else's sexual assault in adulthood	13.3 (0.98)	5.9 (0.20)	54.09	<0.001
Someone else's physical abuse before age 18	3.1 (0.48)	1.9 (0.09)	6.28	0.012
Someone else's victimization by intimate partner violence	4.9 (0.51)	2.9 (0.14)	14.57	<0.001
Someone else's physical assault other than intimate partner violence	10.3 (0.92)	5.4 (0.18)	26.65	<0.001
Someone else being kidnapped or held hostage	4.8 (0.49)	4.4 (0.15)	0.50	0.479
Someone else being stalked	1.2 (0.26)	0.8 (0.07)	2.25	0.134
Someone else being mugged, held up, threatened with weapon	1.9 (0.34)	1.2 (0.07)	4.63	0.031
Seeing a dead body or body parts	4.8 (0.61)	3.2 (0.11)	6.68	0.010
Another traumatic event to someone else	2.0 (0.33)	1.5 (0.10)	1.97	0.161

**Table 3**

Most Stressful Events, % (SE), by PTSD Status among Respondents Reporting Any Potentially Traumatic Event Exposure (N=23,936)

Event	PTSD (n=2339)	No PTSD (n = 21,597)	$\chi^2$ (1 d.f.)	p-value
<i>Directly experienced by respondent</i>				
Serious or life-threatening injury	6.2 (0.62)	7.1 (0.25)	2.00	0.157
Serious or life-threatening illness	5.6 (0.68)	9.3 (0.26)	29.11	<0.001
Seeing dead body or body parts	8.2 (0.64)	10.4 (0.29)	11.59	<0.001
Injury in a terrorist attack	0.3 (0.13)	0.2 (0.04)	0.72	0.395
Natural disaster	1.3 (0.33)	4.7 (0.34)	53.61	<0.001
Sexual abuse before age 18	21.7 (0.82)	5.4 (0.17)	265.61	<0.001
Sexual assault in adulthood	4.7 (0.52)	0.1 (0.07)	44.01	<0.001
Physical abuse before age 18	4.7 (0.60)	1.4 (0.10)	27.08	<0.001
Victimization by intimate partner violence	8.3 (0.64)	3.1 (0.13)	61.71	<0.001
Physical assault by someone else	1.1 (0.22)	1.5 (0.10)	3.07	0.080
Kidnapping or being held hostage	0.6 (0.20)	0.3 (0.03)	3.56	0.059
Stalking	1.8 (0.27)	0.8 (0.06)	12.00	<0.001
Being mugged, held up, threatened with weapon	2.1 (0.35)	3.1 (0.14)	7.27	0.007
Active military combat	3.1 (0.51)	1.5 (0.10)	9.09	0.003
Service as peacekeeper, relief worker	0.02 (0.02)	0.1 (0.03)	6.24	0.013
Being a civilian in a war zone, place of terror	0.7 (0.23)	0.4 (0.05)	2.25	0.134
Refugee status	0.1 (0.06)	0.2 (0.04)	4.32	0.038
Prisoner of war status	0.1 (0.04)	0.1 (0.02)	0.39	0.531
Incarceration in juvenile detention or jail	1.3 (0.28)	1.8 (0.11)	2.24	0.134
Another traumatic event	3.6 (0.47)	1.5 (0.12)	20.43	<0.001
<i>Experiences of others that respondent witnessed or learned about, or to the details of which respondent was repeatedly exposed</i>				
Someone else's serious or life-threatening injury	4.9 (0.51)	7.9 (0.27)	24.61	<0.001
Someone else's serious or life-threatening illness	6.7 (0.71)	16.5 (0.44)	187.46	<0.001
Someone else's injury in a terrorist attack	1.7 (0.32)	3.0 (0.15)	13.30	<0.001
Someone else exposed to natural disaster	0.4 (0.16)	0.7 (0.06)	3.53	0.060
Someone else's sexual abuse before age 18	0.7 (0.28)	2.2 (0.13)	24.31	<0.001
Someone else's sexual assault in adulthood	4.0 (0.51)	4.4 (0.17)	0.47	0.492
Someone else's physical abuse before age 18	0.7 (0.24)	1.0 (0.10)	1.76	0.184
Someone else's victimization by intimate partner violence	0.7 (0.26)	1.5 (0.11)	8.52	0.004
Someone else's physical assault other than intimate partner violence	1.5 (0.27)	3.1 (0.14)	32.73	<0.001
Someone else being kidnapped or held hostage	0.5 (0.16)	1.8 (0.12)	38.78	<0.001
Someone else being stalked	0.3 (0.15)	0.4 (0.05)	0.25	0.619
Someone else being mugged, held up, threatened with weapon	0.1 (0.07)	0.3 (0.04)	6.42	0.011
Seeing a dead body or body parts	1.0 (0.24)	1.7 (0.10)	6.52	0.011

Event	PTSD (n=2339)	No PTSD (n = 21,597)	$\chi^2$ (1 d.f.)	p-value
Another traumatic event to someone else	0.9 (0.22)	1.4 (0.10)	3.85	0.050

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**Table 4**

Adjusted Odds Ratios (95% Confidence Intervals)<sup>a,b</sup> of 12-month and Lifetime DSM-5 Posttraumatic Stress Disorder and Other Psychiatric Disorders

Other Psychiatric Disorder	Adjusted Odds Ratio (95% Confidence Interval)	
	Past-year	Lifetime
Any substance use disorder	<b>1.3</b> (1.13–1.56)	<b>1.5</b> (1.34–1.74)
Alcohol use disorder	0.9 (0.77–1.10)	<b>1.2</b> (1.01–1.37)
Nicotine use disorder	<b>1.2</b> (1.06–1.46)	<b>1.3</b> (1.16–1.48)
Any drug use disorder	<b>1.7</b> (1.29–2.14)	<b>1.5</b> (1.24–1.81)
Any mood disorder	<b>2.4</b> (2.04–2.79)	<b>3.0</b> (2.57–3.49)
Major depressive disorder	<b>1.6</b> (1.32–1.88)	<b>1.7</b> (1.42–1.96)
Bipolar I	<b>2.1</b> (1.60–2.63)	<b>2.2</b> (1.70–2.81)
Dysthymia	<b>1.5</b> (1.20–1.84)	<b>1.5</b> (1.23–1.75)
Any anxiety disorder	<b>2.8</b> (2.46–3.28)	<b>2.6</b> (2.27–3.01)
Panic disorder	<b>2.1</b> (1.60–2.64)	<b>2.1</b> (1.77–2.44)
Agoraphobia	<b>1.7</b> (1.30–2.17)	<b>1.6</b> (1.23–1.99)
Social phobia	<b>1.6</b> (1.25–2.02)	<b>1.5</b> (1.23–1.81)
Specific phobia	<b>1.4</b> (1.16–1.76)	<b>1.4</b> (1.14–1.67)
Generalized anxiety disorder	<b>2.2</b> (1.85–2.64)	<b>2.0</b> (1.76–2.35)
Antisocial personality disorder	<b>1.8</b> (1.43–2.27)	<b>1.7</b> (1.44–2.09)
Borderline personality disorder	<b>3.3</b> (2.71–3.92)	<b>2.8</b> (2.40–3.28)
Schizotypal personality disorder	<b>2.4</b> (2.02–2.95)	<b>2.3</b> (1.86–2.73)

<sup>a</sup>Odds ratios adjusted for age, race/ethnicity, sex, education, family income, marital status, urbanicity, geographic region and additional psychiatric comorbidity.

<sup>b</sup>Significant ( $p < 0.05$ ) ORs are shown in **boldface**.

**Table 5**

Disability Scores from the 12-Item Short Form Health Survey (SF-12 v2) by 12-Month Posttraumatic Stress Disorder (PTSD)

SF-12v2 Scores	PTSD, Mean (SE)	No PTSD, Mean (SE)	$\beta \pm SE^a$
Mental Health	42.0 (0.36)	52.2 (0.08)	$-3.2 \pm 0.39^b$
Social Functioning	41.3 (0.40)	51.1 (0.09)	$-3.8 \pm 0.43^b$
Role Emotional Functioning	39.9 (0.34)	48.9 (0.12)	$-3.5 \pm 0.35^b$
Mental Component Summary	41.2 (0.33)	51.3 (0.08)	$-3.2 \pm 0.35^b$

<sup>a</sup> $\beta$  coefficients depict associations of SF-12 v2 scores with 12-month PTSD, adjusted for sex, age, race/ethnicity, education, family income, marital status, urbanicity, geographic region and additional 12-month psychiatric comorbidity.

<sup>b</sup> Means scores differ significantly ( $p < 0.001$ ) between individuals with and without PTSD, after adjustment for sociodemographic and diagnostic covariates.