Trauma Exposure, Posttraumatic Stress Disorder and Depression in an African-American Primary Care Population

Tanya N. Alim, MD; Elaine Graves, PhD; Thomas A. Mellman, MD; Notalelomwan Aigbogun, MS; Ekwenzi Gray, PhD; William Lawson, PhD, MD; and Dennis S. Charney, MD
Washington, District of Columbia and New York, New York

Objective: Trauma exposure is high in African Americans who live in stressful urban environments. Posttraumatic stress disorder (PTSD) and depression are common outcomes of trauma exposure and are understudied in African Americans. African Americans are more likely to seek treatment for psychiatric disorders in a primary care setting. Our study evaluated trauma exposure, PTSD and major depression in African Americans attending primary care offices.

Method: Six-hundred-seventeen patients (96% African Americans) were surveyed for trauma exposure in the waiting rooms of four primary care offices. Those patients reporting significant traumatic events were invited to a research interview. Of the 403 patients with trauma exposure, 279 participated.

Results: Of the 617 participants, 65% reported ≥1 clearly traumatic event. The most common exposures were transportation accidents (42%), sudden unexpected death of a loved one (39%), physical assault (30%), assault with a weapon (29%) and sexual assault (25%). Lifetime prevalence of PTSD and a major depressive episode (MDE) among those with trauma exposure (n=279) was 51% and 35%, respectively. The percent of lifetime PTSD cases (n=142) with comorbid MDE was 46%. Lifetime PTSD and MDE in the trauma-exposed population were approximately twice as common in females than males, whereas current PTSD rates were similar.

Conclusions: Our rate of PTSD (approximately 33% of those screened) exceeds estimates for the general population. Rates of MDE comorbid with PTSD were comparable to other studies. These findings suggest the importance of screening African Americans for PTSD, in addition to depression, in the primary care setting.

Key words: posttraumatic stress disorder ■ trauma ■ depression ■ African Americans ■ primary care

INTRODUCTION

Posttraumatic stress disorder (PTSD) is a prevalent cause of distress and disability in the general population.[1] According to national epidemiologic studies, the prevalence of PTSD ranges between 8–12% in the general population.[1] Trauma exposure appears to be high in African Americans, especially among those living in stressful urban environments. Breslau et al.[2] reported increased rates of trauma exposure in nonwhites compared with whites for assaultive violence (55% vs. 32%) and learning about others experiencing trauma (69% vs. 61%). African-American participants comprised >80% of the nonwhite sample (permission from N. Breslau, personal communication, October 2005). Sexual assault and nonsexual violence are known to be high-impact traumas that confer greater risk for the development of PTSD than most other trauma categories.[2,3] Information is wide ranging as to the prevalence of PTSD in African Americans. Some researchers report higher rates of PTSD in African Americans as compared with Caucasian Americans, whereas others report lower rates in African Americans.[2-5] However, these differences appear to have been a function of sociodemographic factors, including different rates of trauma exposure. Misdiagnosis and underdiagnosis of psychiatric disorders have been a common problem in African Americans that likely applies to PTSD, although the extent to which PTSD is misdiagnosed in African Americans has not been determined.[6] The two other major national epidemiological studies of psychiatric disorders have not indicated rates of trauma exposure or PTSD as a function of race.[3,7] National surveys of crime victimization indicate greater rates of aggravated physi-

cal assault, sexual assault and partner abuse in African Americans as compared to Caucasian Americans.[8] Accordingly, patterns of trauma exposure place African Americans at greater risk for PTSD than the general population.

Whether there are differences in the risk for PTSD between African Americans and other groups who experience similar traumas has not been established with certainty. A higher rate of PTSD in African Americans than Caucasian Americans was found in a study of veterans exposed to combat. The difference appeared to be accounted for by socioeconomic status (SES) and intensity of trauma exposure.[4]

Depression is also a common outcome of trauma exposure and is often comorbid with PTSD. According to the National Comorbidity Survey (NCS), 48% of men and 49% of women with PTSD also had a major depressive episode (MDE).[3] Several large epidemiological studies evaluating depression independently from other psychiatric disorders suggest lower rates of depression for African Americans in general as compared with other groups. The Epidemiologic Catchment Area study reported that African Americans were less likely to meet criteria for major depressive disorder (MDD) and more likely than whites to experience phobias.[9] MDE is distinguished in this paper from MDD because MDE can occur in patients with bipolar disorder as well. Kessler et al.[10] reported a significantly lower risk for lifetime MDD in the NCS for non-Hispanic blacks compared with non-Hispanic whites. The Third National Health and Nutrition Examination Survey (NHANES III) also found lower rates of MDE in non-Hispanic blacks; however, they were found to have higher rates of dysthymia.[11] The National Epidemiologic Survey of Alcoholism and Related Conditions (NESARC) reported lower rates of MDD in African Americans as compared with whites.[12] Reasons for these differences have been postulated to include underreporting and detection despite the use of systematic methods of assessment, variation in the expression of mood disorders in African Americans and/or true reduced prevalence.

Primary care is a particularly important setting for detecting and providing initial intervention for PTSD and depression for African Americans. African Americans are more likely to seek help for mental health problems from a primary care physician than a mental health professional.[13] Current efforts to detect mental health conditions in the primary care setting tend to focus on depression. There have been a few studies that address PTSD in nonveterans in primary care settings.[14-16] These studies found rates for trauma exposure ranging from 23–83% and for PTSD ranging from 12–44%. The percentage of African-American participants in these samples

is small (4–6% in the two studies from the United States).[14,15] If PTSD is common, due to high trauma exposure, and depression has lower prevalence rates in African Americans than in the general population, then PTSD may be the more significant mental health problem for African-American patients residing in stressful urban environments. High rates of depression comorbid with PTSD have been found in the general population,[3] but the comorbidity of depression and PTSD in the African-American population has not yet been determined. Like depression, alcohol and substance use disorders are common in individuals with significant trauma exposure,[3] especially in males. African Americans exposed to traumatic experiences are more likely to be at increased risk for developing alcohol and/or substance problems as well. With respect to sex, the lifetime risk for any anxiety and/or mood disorder is higher in women than in men. African-American women who are exposed to trauma may be at increased risk for developing depression comorbid to PTSD.[17]

The purpose of this report is to describe trauma exposure, PTSD and the comorbidities of depression and alcohol/substance use disorder (Etoh/SUDS) in a predominantly African-American population recruited from the setting of primary care. Relationships of PTSD to sex and other sociodemographic variables are also explored.

Table 1. Characteristics of study participants (N=617)

	N	%
Age (Years)		
18–34	211	34
35–49	221	36
≥50	185	30
Sex		
Male	195	32
Female	422	68
Race		
Black/African-American	592	96
Hispanic/Latino (nonblack)	4	0.6
Native American	1	0.2
White/Caucasian	8	1.3
Other	12	2.0
Marital Status		
Married/cohabitating	160	26
Separated/widowed/divorced	106	17
Single	351	57
Education		
< High school	144	23
High school	209	34
Some college	140	23
Annual Family Income		
$10,000–$19,999	259	42
$20,000–$39,999	139	23
≥$40,000	202	33
Not disclosed	17	3

METHOD

Setting

Participants were recruited from the primary care offices of Howard University Hospital (HUH). HUH is a part of Howard University, a historically black institution located in the District of Columbia. The recruitment sites included four offices of the departments of Medicine or Community Health and Family Practice.

Recruitment

Adult men and women were approached by a research assistant while waiting for appointments and were asked to complete a self-report questionnaire after the purpose and procedures of the study were explained and informed consent was obtained. Forty-one percent of those approached agreed to participate. All participants identified with a clear history of ≥1 significant traumatic event were invited back to participate in an in-depth interview in the psychiatry research department. Participants were reimbursed for their time in both phases of the study. The original data were collected during the period of June 2003 to December 2004.

Assessment

Initial assessment included a self-report survey containing sociodemographic and general health questions that was modified from a previous study;[18] and the Life Events Checklist, which asks about exposure to 16 specific categories of traumatic events.[19,20]

A significant lifetime traumatic event (criterion for research interview) was defined to include events that are unambiguously high-impact traumas (e.g., sexual, physical assault, assault with a weapon, serious accidents). The traumatic event(s) met criterion A1 for the DSM-IV diagnosis of PTSD. Participants who only endorsed events that are not uniformly severely traumatic, such as motor vehicle accidents, were screened further by phone to determine whether the event was severely threatening and experienced with feelings of helplessness or horror. Those qualifying participants who agreed to follow up completed a diagnostic assessment that included the Structured Clinical Interview for the DSM-IV (SCID-IV) and the Clinician Administered PTSD Scale (CAPS).[19,21] These interviews determined diagnostic criteria for PTSD and other psychiatric diagnoses and their course. Participants were also queried as to whether they had been receiving mental health treatment. The last 66 participants were asked whether they had discussed their traumatic experience(s) and/or other mental health problem (including depression) with their primary care medical provider.

These assessments were done by experienced research staff who participated in diagnostic training and reliability testing for the SCID. Staff was trained via observation of eight SCID training videotapes and completion of ≥5 criterion videotapes. Assessors did not conduct interviews independently for the study until they achieved a minimum kappa score of ≥0.75, with all of the criterion videotapes supplied by the Biometrics Research Department (New York State Psychiatric Institute) and the NIMH Mood and Anxiety Research Program. CAPS training involved observation and supervision by experienced raters (Alim and Graves). Final SCID and CAPS diagnoses of trained staff were determined in a consensus meeting conducted by the first author (Alim, board-certified psychiatrist).

Data Analysis

Descriptive information, including the frequencies of diagnoses and their standard errors, were calculated. The significance of associations of trauma categories and diagnoses with sex was analyzed by Chi square. Associations of sex and sociodemographic factors with PTSD, MDE or Etoh/SUDS were assessed in separate logistic regression analyses, and results presented as estimated odds ratios and 95% confidence intervals. Statistical significance was assessed as p<0.05. All analyses were done using SPSS versions 13 and 14.

Table 2. Lifetime prevalence of specific traumatic events

Type of Trauma	Males (N=195)		Females (N=422)		Total (N=617)	
	N	%	N	%	N	%
Natural disaster	28	15	69	16	97	16
Transportation accident	89	46	171	40	260	42
Serious accident	31	16	52	12	83	14
Physical assault	69*	36	118*	28	187	30
Assault with a weapon	74**	38	80**	19	154	25
Sexual assault	17***	9	130**	31	147	24
Unwanted sexual experience	21***	11	101**	24	122	20
Combat exposure	19	10	9*	2	28	5
Life-threatening illness, serious injury	52	27	89	21	141	23
Sudden unexpected death	73	38	166	39	239	39

* M>F, p <0.05; ** M>F, p <0.001; *** F>M, p<0.001

RESULTS

The characteristics of the study population are presented in Table 1. Six-hundred-seventeen patients were screened in primary care. Four-hundred-three of the 617 participants that were screened in primary care met the criteria for trauma exposure (65%). Two-hundred-seventy-nine participants of the 403 (69%) with trauma exposure completed the face-to-face interviews. The participants (195 males, 422 females) were predominantly young and middle-aged adults (ages ranged 18–81). Five-hundred-ninety-two of the initial 617 primary care patient sample were African Americans (96%). Most of the participants were single (57%). While most participants were high-school graduates, degrees of education ranged from less than high school to college level and above. Annual family income was <$20,000 (poverty level) in 259 of the 617 participants.

Of the 617 participants completing the survey, 530 (86%) endorsed ≥1 of the trauma categories. The mean number of traumatic events endorsed by participants completing the survey was 3.53 (SD=2.93). However, the study team determined that 403 of the 617 participants (65%) completing the survey experienced a trauma that had unambiguously high impact based on follow-up questioning (DSM-IV criterion A1). The mean number of clearly high-impact traumatic events among the participants was 1.83 (SD=2.02, range 0–14). As shown in Table 2, the most common trauma categories endorsed were transportation accidents (42%), sudden unexpected death of a loved one (39%), physical assault (30%), assault with a weapon (25%) and sexual assault (24%). Sexual assault and unwanted sexual experiences were more common in females (31% and 24%, respectively) (versus 9% and 11% in males; χ^2=34.90, df=1, p<0.001; χ^2=14.00, df=1, p<0.001). Assault with a weapon, physical assault and combat exposure were more common in males (38%, 36% and 10%, respectively vs. 19%, 28% and 2% in females, respectively; χ^2=26.86, df=1, p<0.001; χ^2=3.94, df=1, p<.05; χ^2=18.26, df=1, p<0.001).

Lifetime prevalence of PTSD in the trauma-exposed group (n=279) was 51% (Table 3). The estimated lifetime prevalence of PTSD in the total sample (N=617) was 33% [the trauma-exposure rate (65%) multiplied by the lifetime PTSD rate (51%) in the trauma-exposed sample]. The lifetime prevalence of MDE in the sample (n=279) was 35%. Of the 98 participants with lifetime MDE, 77 (79%) had unipolar MDD, and 21 (21%) had bipolar disorder (13 bipolar disorder I; five bipolar disorder II; and three bipolar disorder, not otherwise specified).

The lifetime prevalence of Etoh/SUDS in the trauma-exposed group (n=279) was 51%. Sixty-five (46%) of the142 lifetime PTSD cases had comorbid MDE and 74 (52%) had comorbid lifetime Etoh/SUDS. Lifetime prevalences of PTSD and MDE were more common in females than males in this trauma-exposed population (χ^2=18.117.7, df=1, p<0.001; χ^2=19.52, df=1, p<0.001; Table 3). The current (one-month) prevalence rates of

Table 3. Prevalence of lifetime DSM-IV lifetime posttraumatic stress disorder, major depressive episode and alcohol/substance use disorder by sociodemographic characteristics (n=279)

Sociodemographic Characteristic	PTSD (n=142) % (SE)	MDE (n=98) % (SE)	SUD (n=141) % (SE)
Total*	51 (3.00)	35 (2.86)	51 (3.00)
Sex			
Male	33 (4.84)	18 (3.92)	59 (5.04)
Female	60 (3.63)	44 (3.68)	46 (3.69)
Age (Years)			
18–34	54 (5.47)	44 (5.45)	42 (5.41)
35–49	55 (4.90)	36 (4.72)	61 (4.82)
≥50	44 (5.27)	27 (4.69)	47 (5.29)
Marital Status			
Single	54 (3.98)	39 (3.90)	48 (4.00)
Married/cohabitating	46 (6.18)	21 (5.10)	50 (6.20)
Separated/widowed/divorced	45 (6.90)	42 (6.83)	59 (6.83)
Education			
< High school	52 (6.20)	41 (6.10)	67 (5.85)
High school	48 (5.20)	33 (4.84)	46 (5.14)
Some college	53 (4.66)	35 (4.43)	45 (4.64)
Income			
<$20,000	58 (4.23)	39 (4.18)	54 (4.27)
$20,000–$39,999	43 (6.29)	35 (6.01)	46 (6.33)
$40,000–$70,000+	41 (6.35)	31 (5.98)	44 (6.41)

* Percent is >100 because some participants have >1 diagnosis; Data are given as percentage of participants (SE); SE: standard error; PTSD: posttraumatic stress disorder; MDE: major depressive episode; SUD: alcohol/substance use disorders (Etoh/SUDS)

PTSD in the trauma-exposed group (n=279) were similar in both males (20%) and females (27%). Males were more likely to have a lifetime Etoh/SUDS (χ^2=4.68, df=1, p<0.05).

The lifetime risks of PTSD, MDE and Etoh/SUDS were examined across sociodemographic population groups (Table 4). Females showed significantly higher risks for PTSD and MDE (ORs=3.0 and 3.7, respectively). Compared with the oldest age group, MDE risk was greater for the youngest age group, 18–34 years old. The risk of MDE was significantly lower among married and cohabitating participants (OR=0.4) as compared with those who were single, separated, widowed or divorced. The risk of Etoh/SUDS was significantly greater in those with less-than-a-high-school education (OR=2.5). Risks of lifetime PTSD, MDE and/or Etoh/SUDS did not differ significantly by income.

Sixteen percent of the participants (n=279) with any lifetime psychiatric disorder received specialized mental health treatment (most commonly in community mental health center settings), and 36% of the assessed subgroup with a lifetime disorder reported having discussed mental health problems with their primary care provider. The rate within the group (n=279) with current PTSD receiving mental health treatment was 21%. Fifty-three percent of the smaller subgroup (n=66) with current PTSD reported discussion of their condition with their physician. For the group with current depression, 16% were receiving mental health treatment, and 30% of the assessed subgroup reported discussion with the primary care provider.

DISCUSSION

This study was conducted to evaluate trauma exposure, PTSD and depression in a primary care setting serving predominantly African Americans. Most of our participants attending primary care settings were exposed to ≥1 traumatic event (65% by conservative criteria). The lifetime prevalence of PTSD was higher in females than males, while the current prevalence of PTSD was not significantly different between sexes. The prevalence of both lifetime and current depression was higher in trauma-exposed females. Males were more likely to have an alcohol/substance use disorder.

Kessler et al.[3] found a trauma exposure rate of 60% in a large, representative sample of nongeriatric adults residing in the community. This rate is similar to the prevalence in our sample (65%), and we were likely more conservative in designating a participant as trauma exposed. For example, we did not include participants that may have experienced such traumas as traumatic grief (loss of a loved one) and/or minor motor vehicle accidents as their sole trauma exposure. The relationships among race, trauma exposure and PTSD diagnosis were not discussed in the Kessler et al. report of the NCS.[3] In the Detroit Area Survey of Trauma, Breslau et al.[2] found the rate of exposure to any trauma to be 90%, with higher rates for assaultive violence in non-whites. Wide ranges in trauma-exposure rates have been reported for various African-American samples. Rates of trauma exposure between 32% and 97% have been found in studies that reported on community-based African-American adolescents,[22-25] and 61% in African-American adults residing in the southeastern states.[5] The major epi-

Table 4. Odds ratio of DSM-IV lifetime posttraumatic stress disorder, major depressive episode and alcohol/substance use disorder by sociodemographic characteristics (n=279)

Sociodemographic Characteristic	PTSD	MDE	SUD
	Odds Ratio (95% CI)	Odds Ratio (95% CI)	Odds Ratio (95% CI)
Sex			
Male	1.0	1.0	1.0
Female	3.0 (1.8–5.1)	3.7 (2.0–6.7)	0.6 (0.4–1.0)
Age (Years)			
18–34	1.4 (0.8–2.6)	2.2 (1.1–4.1)	0.8 (0.5–1.5)
35–49	1.5 (0.9–2.7)	1.5 (0.8–2.8)	1.8 (1.0–3.1)
≥50	1.0	1.0	1.0
Marital Status			
Single	1.4 (0.8–2.7)	0.9 (0.5–1.7)	0.7 (0.4–1.2)
Married/cohabitating	1.0 (0.5–2.1)	0.4 (0.2–0.9)	0.7 (0.3–1.5)
Separated/widowed/divorced	1.0	1.0	1.0
Education			
< High school	1.0 (0.5–1.8)	1.3 (0.7–2.5)	2.5 (1.3–4.6)
High school	0.9 (0.5–1.5)	0.9 (0.5–1.6)	1.1 (0.6–1.8)
Some college	1.0	1.0	1.0
Income			
<$20,000	1.0	1.0	1.0
$20,000–$39,999	1.1 (0.4–3.0)	2.2 (0.7–7.1)	0.8 (0.3–2.0)
$40,000–$70,000+	0.6 (0.2–1.7)	1.9 (0.6–6.4)	0.5 (0.2–1.6)

CI: confidence interval

demiologic studies of PTSD reported lifetime prevalence rates ranging between 7.8–14%.[2,3] In the NCS, the lifetime prevalence of PTSD in those individuals with trauma exposure was 8% for males and 20% for females[3]; in the Detroit Area Trauma Study, the PTSD rates were 10% for males and 14% for females exposed to trauma.[2] PTSD rates among our trauma-positive sample may be related to higher-impact trauma.

Trauma-exposure and PTSD rates tend to be elevated in primary care populations. In a predominantly Caucasian-American primary care population from the northeast, Bruce et al.[14] found an 83% rate for trauma exposure. Rates of exposure for the specific categories of trauma included: serious accidents (38%), witnessed injuries to others (37%) and physical assault without a weapon (32%). The higher overall rates of trauma exposure in the study by Bruce et al.[14] compared to our study may be attributable to their including participants who reported witnessing injuries to others, whereas other trauma categories occurred at similar frequencies to our sample (e.g., transportation accidents 42%, sexual assault 24% and physical assault 30%). In the study by Bruce et al.[14], 44% of the trauma-exposed sample met criteria for PTSD, yielding a rate that is similar to our study and higher than what is found in the general population. Thus, the high rates of trauma exposure and PTSD found in our study appear not to be unique to African-American primary care populations. Higher rates of PTSD in primary care may occur for several reasons. Trauma-exposed individuals are high utilizers of medical care services.[14,26,27] A PTSD diagnosis has been found to be associated with increased use of medical services.[26] This may in part be due to individuals with PTSD being more vulnerable to medical illnesses.[28]

This study is consistent with previous findings that women are more likely to have PTSD and/or MDE diagnosis as compared with men.[2,3] The finding that the current prevalence of PTSD was not different between sexes in our sample is intriguing. While women are more susceptible to developing PTSD, this finding suggests that African-American women are also more likely to recover. Previous investigators have suggested that African-American women exposed to severe trauma may be more resilient to stress, though the evidence to support this statement is limited.[29] Research is needed to verify the impression that African-American women who are victims of multiple traumas have high resilience despite the hardships they have endured. Longitudinal studies of African Americans exposed to multiple traumas may help us understand what factors lead to resilience in this subpopulation.[29] Preliminary observations from other investigators suggest that the style of family upbringing seen in urban African-American families may contribute to resiliency in African-American women.[30]

High rates of depression comorbid with PTSD have been found in the general population,[3] but the rates of depression and PTSD in our primary care sample with trauma exposure were not as common. The rate of MDE comorbid with PTSD was similar to that of Kessler et al.[3] Our population is distinguished, however, by lower MDE in the males with PTSD and higher rates of bipolar disorder among participants with MDE. While reasons for the high representation of bipolar illness in our trauma-exposed African-American sample is unclear, higher rates of suspected bipolar disorder have been found in a primary care setting[31] and among those with a diagnosis of PTSD.[3] The lower rate of depression and higher rate of PTSD in this sample suggests the importance of more aggressive screening for PTSD in African Americans.

Limitations of this study include a small sample size, recruitment from a clinical setting and incomplete participation. Our prevalence rates for PTSD and MDE in African Americans are determined from a clinical population, which is potentially biased as compared to the general population. Sixty-nine percent of the trauma-exposed sample (n=279) returned to participate in the detailed SCID interview. Reasons for incomplete participation (31%) (i.e., not following up for return interview) may have included mistrust of research staff, lack of time to participate in a lengthy research interview or difficulty contacting participants by phone. In addition, we cannot determine the prevalence rates of depression in the overall sample since depression can occur absent trauma, and definitive diagnostic data were only obtained in the trauma-exposed subgroup. It is therefore unclear to what extent the findings generalize to the broader African-American population.

Future research questions that would be worthwhile to investigate include the relationship of trauma types to the risk of PTSD in African Americans; and protective and risk factors linked to the development of PTSD, depression and other comorbid psychiatric disorders. Greater trauma and PTSD in primary care or clinical populations is not a new or specific finding. However, the high PTSD rate in this one urban African-American population sample suggests the importance of repeating this study in other urban African-American settings. If the findings of high PTSD are replicated elsewhere in this population, screening and intervention for PTSD may be as important as screening and intervention for depression in the primary care setting. As other investigators have noted in the general population, a high percentage of African Americans with PTSD will be more likely to require treatment throughout the healthcare systems.[15] Traumatic experiences, including sexual abuse, domestic violence and military combat, have been associated with negative health outcomes, problems with alcohol/substance use and increased healthcare utilization.[15] Our data is consistent with previous findings for African Americans[13] in preliminarily indicating that recognition in primary care exceeds specialized mental health treatment. Most cases of mental

health problems appear to go unrecognized, however. Additional studies may indicate the importance of screening for PTSD in primary care settings. Procedures that would enhance the recognition and treatment of PTSD and depression for African Americans and others attending primary care could be of great value. Overall, the study findings suggest that both mental health providers and primary care physicians would benefit from increased sensitivity to detecting the symptoms of PTSD and providing appropriate pharmacologic and psychosocial treatment options.

ACKNOWLEDGEMENTS

REFERENCES
1. Kessler RC. Posttraumatic stress disorder: the burden to the individual and to society. J Clin Psychiatry. 2000;61(suppl 5):4-14.
2. Breslau N, Kessler RC, Chilcoat HD, et al. Trauma and posttraumatic stress disorder in the community: the 1996 Detroit Area Survey of Trauma. Arch Gen Psychiatry. 1998;55(7):626-632.
3. Kessler RC, Sonnega A, Bromet E, et al. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiatry. 1995;52(12):1048-1060.
4. Kulka RA, Schlenger WE, Fairbank JA, et al. Trauma and the Vietnam generation: Report of findings from the National Vietnam Veterans Readjustment Study. New York: Brunner/Mazel; 1990.
5. Norris FH. Epidemiology of Trauma: Frequency and Impact of Different Potentially Traumatic Events on Different Demographic Groups. J Consult Clin Psychol. 1992;60(3):409-418.
6. Lawson WB. Mental health issues for African Americans. Thousand Oaks, CA: Sage Publications; 2003;561-569.
7. Robins LN, Helzer JE, Weissman MM, et al. Lifetime prevalence of specific psychiatric disorders in three sites. Arch Gen Psychiatry. 1984;41(10):949-958.
8. U.S Department of Justice. Criminal Victimization in the United States, 2002 Statistical Tables: National Crime Victimization Survey, 2003. www.icpsr.umich.edu/NACJD/index.htm.
9. Regier DA, Farmer ME, Rae DS, et al. One-month prevalence of mental disorders in the United States and sociodemographic characteristics: the Epidemiologic Catchment Area study. Acta Psychiatrica Scandinavica. 1993;88(1):35-47.
10. Kessler RC, Berglund P, Demler O, et al. The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). JAMA. 2003;289(23):3095-3105.
11. Jonas BS, Brody D, Roper M, et al. Prevalence of mood disorders in national sample of young American adults. Soc Psychiatry Psychiatr Epidemiol. 2003;38:618-624.
12. Hasin DS, Goodwin RD, Stinson FS, et al. Epidemiology of Major Depressive Disorder. Arch Gen Psychiatry. 2005;62:1097-1106.
13. Snowden LR, Pingitore D. Frequency and scope of mental health service delivery to African Americans in primary care. Ment Health Serv Res. 2002;4(3):123-130.
14. Bruce SE, Weisberg RB, Dolan RT, et al. Trauma and Posttraumatic Stress Disorder in Primary Care Patients. Primary Care Companion J Clin Psychiatry. 2001;3(5):211-217.
15. Stein MB, McQuaid JR, Pedrelli P, et al. Posttraumatic stress disorder in the primary care medical setting. Gen Hosp Psychiatry. 2000;22(4):261-269.
16. Taubman-Ben-Ari O, Rabinowitz J, Feldman D, et al. Post-traumatic stress disorder in primary-care settings: prevalence and physicians' detection. Psychol Med. 2001; 31(3):555-560.

17. Kessler RC, Berglund P, Demler O, et al. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry. 2005;62(6):593-602.
18. McCauley J, Kern DE, Kolodner K, et al. Clinical characteristics of women with a history of childhood abuse: unhealed wounds. JAMA. 1997; 277(17):1362-1368.
19. Blake DD, Weathers FW, Nagy LM, et al. Clinician-Administered PTSD Scale for DSM-IV. National Center for Posttraumatic Stress Disorder; 1998.
20. Gray MJ, Litz BT, Hsu JL, et al. Psychometric properties of the life events checklist. Assessment. 2004;11(4):330-341.
21. First MB, Spitzer RL, Gibbon M, et al. Structured Clinical Interview for the DSM-IV-TR Axis I Disorders- Patient Edition (SCID-I/P); 2001.
22. Fitzpatrick KM, Boldizar JP. The prevalence and consequences of exposure to violence among African-American youth. J Am Acad Child Adolesc Psychiatry. 1993;32(2):424-430.
23. McGee ZT, Davis BL, Brisbane T, et al. Urban Stress and Mental Health Among African-American Youth: Assessing the Link between Exposure to Violence, Problem Behavior, and Coping Strategies. J Cult Divers. 2001; 8(3):94-104.
24. Selner-O'Hagan MB, Kindlon DJ, Buka SL, et al. Assessing exposure to violence in urban youth. J Child Psychol Psychiatry. 1998;39(2):215-224.
25. Shakoor BH, Chalmers D. Co-Victimization of African-American Children Who Witness Violence: Effects on Cognitive, Emotional, and Behavioral Development. J Natl Med Assoc. 1989;83(3):233-238.
26. Greenberg PE, Sisitsky T, Kessler RC, et al. The economic burden of anxiety disorders in the 1990s. J Clin Psychiatry. 1999;60(7):427-435.
27. Koss MP, Woodruff WJ, Koss PG. Relation of criminal victimization to health perceptions among women medical patients. J Consult Clin Psychol. 1990;58(2):147-152.
28. Friedman MJ. Posttraumatic stress disorder. J Clin Psychiatry. 1997;58 (suppl 9):33-36.
29. Vogel L, Marshall L. PTSD symptoms and partner abuse: low income women at risk. J Trauma Stress. 2001;14(3):569-584.
30. Grossman FK CA, Kepkep SS, & Koenen KC. With the Phoenix Rising: Lessons from Ten Resilient Women Who Overcame the Trauma of Childhood Sexual Abuse. 1st ed. San Francisco, CA: Jossey-Bass Publishers; 1999;258.
31. Das AK, Olfson M, Gameroff MJ, et al. Screening for bipolar disorder in a primary care practice. JAMA. 2005;293(8):956-963. ■

We Welcome Your Comments

The Journal of the National Medical Association welcomes your Letters to the Editor about articles that appear in the JNMA or issues relevant to minority healthcare. Address correspondence to EditorJNMA@nmanet.org.