

Undocumented PTSD Among African American Clients With Serious Mental Illness in a Statewide Mental Health System

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Objectives: African Americans are at increased risk for trauma exposure and the development of posttraumatic stress disorder (PTSD) relative to other racial groups. Among African Americans with Serious Mental Illness (SMI), PTSD is frequently underdiagnosed and untreated. The primary objective of this study was to investigate trauma exposure, PTSD symptom severity, and the rate of undocumented PTSD in medical records among African Americans diagnosed with SMI. **Methods:** Screening for trauma exposure and PTSD symptoms was implemented among 404 clients receiving community mental health services. Participants endorsed at least 1 traumatic event, had a score of at least 45 on the *DSM-IV* PTSD Checklist indicating probable PTSD, and had a chart diagnosis of an Axis I disorder. **Results:** Around 18.3% of participants had PTSD diagnosed in their medical chart. A diagnosis of schizophrenia/schizoaffective disorder was inversely related to the detection of PTSD in the chart. Client age and gender did not adversely affect the detection of PTSD, and detection rates remained low overall. Childhood sexual abuse was the most commonly endorsed index trauma, followed closely by sudden death of a loved one (including violent death). Participants typically experienced an average of 8 types of traumatic events in their lifetime. Cumulative total trauma exposure significantly predicted PTSD severity. Clients with mood disorders reported more severe PTSD. **Conclusion:** Findings highlight the low detection rate of PTSD and related symptoms in African American clients with SMI. There is a need for early intervention, grief counseling, culturally sensitive trauma screening, and culturally informed treatment options for this population.

Clinical Impact Statement

This study demonstrates how African Americans with serious mental illness (SMI) are underdiagnosed for posttraumatic stress disorder (PTSD). This finding emphasizes the need for routine screening for trauma exposure and PTSD and the need to provide culturally sensitive trauma informed treatment for African Americans with SMI.

Keywords: African American, serious mental illness (SMI), posttraumatic stress disorder (PTSD), trauma screening

African Americans make up approximately 12.8% of the U.S. population, a total of over 40 million people (Bureau, 2019). Disparities exist in the prevalence of PTSD among African Americans

compared to Latinos, Whites, and Asians. In a national representative study of 34,653 U.S. Noninstitutionalized civilians aged 18 and above, African Americans had the highest lifetime prevalence

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The 404 African American participants in the study draw from the sample of 851 in MS1 (published) plus additional cases that were not reported. The data in this article focuses on rates of posttraumatic stress disorder (PTSD) in African Americans with serious mental illness (SMI), whereas MS1 reported on PTSD in individuals with SMI in multiple ethnic groups, including African Americans.

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rate of PTSD (8.7%) compared to Latinos (7.0%), Whites (7.4%), and Asians (4.0%) (Roberts et al., 2011). Compared to Whites, Latinos, and Asians, African Americans are more likely to experience childhood neglect, be a victim of domestic violence, or be kidnapped, stalked, or mugged (Roberts et al., 2011), and are more likely to develop PTSD. Similar findings have been found in other studies (Alegria et al., 2013; McLaughlin et al., 2019). For example, in evaluating a pooled dataset of 13,775 individuals by the Collaborative Psychiatric Epidemiology Studies, McLaughlin et al. (2019) found that the lifetime prevalence rate of PTSD among African Americans was found to be 6.73%, compared to Whites (5.59%), Latinos (3.77%), and Asians (1.64). When examining the chronicity of PTSD among African Americans, remission rate of PTSD ranged from .10 to .35 over a two to five-year period (Pérez Benítez et al., 2014; Sibrava et al., 2019). Moreover, racial discrimination significantly predicted PTSD diagnosis among African Americans (Sibrava et al., 2019).

Trauma and PTSD are especially common among African Americans in urban clinical settings (e.g., primary care, obstetric clinics) with lifetime PTSD rates ranging from 23% to 46% (Alim et al., 2006; Gill et al., 2008; Gillespie et al., 2009). In addition to higher rates of trauma and PTSD, African Americans are less likely to receive mental health treatment than other racial and ethnic groups (Davis et al., 2008; Motley & Banks, 2018; Schwartz et al., 2005; Williams et al., 2007), as well as treatment for their PTSD (Roberts et al., 2011). Even when PTSD has been formally diagnosed, African Americans are less likely to access mental health care for PTSD compared to non-Latino Whites (Nobles et al., 2016). Common barriers to care include transportation, finances, disapproval from family members, and a lack of knowledge of accessing treatment (Davis et al., 2008). African American clients reported longer time to PTSD treatment initiation (Goldberg et al., 2020) and were less likely to engage in PTSD treatment (Doran et al., 2017).

Studies on trauma and PTSD among African American clients with serious mental illness (SMI; such as schizophrenia, bipolar disorder, or major depressive disorder) are more limited. Studies evaluating trauma and PTSD among African Americans with SMI is of importance for several reasons. SMI is defined as “having (within the past year) a diagnosable mental, behavior, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities” (SAMHSA, 2017). Clients with SMI are more vulnerable to violent victimization (Dean et al., 2018; Khalifeh et al., 2016; Sariaslan et al., 2020), which places people at high risk for PTSD in this population (Lu et al., 2013). In a large study of 782 clients with SMI, 84% reported lifetime physical assault, and 52% reported lifetime sexual assault, both of which increased odds of PTSD by threefold (Mueser et al., 2004). The average rate of PTSD among persons with SMI ranged from 23% to 40% in one meta-analysis (Zammit et al., 2018). While the rate of PTSD is high among persons with SMI, documentation of a PTSD diagnosis in the medical records remains consistently low, ranging from 0% to 11% (Lu et al., 2013; Mueser et al., 1998, 2001; Zammit et al., 2018). Underdetection of PTSD among this population could be due to the overlap between PTSD symptoms and symptoms of SMI including persecutory delusions, mania, depression and suicidality, and other neurocognitive deficits (Cusack et al., 2004; Mueser et al., 1998; Salyers et al., 2004; Zammit et al., 2018). Therefore, routine screening of

PTSD in community mental health centers for persons with SMI has been recommended (Zammit et al., 2018). Moreover, African Americans are overrepresented in studies of SMI (Lu et al., 2013; Mueser et al., 2004), suggesting the substantial need to study this population in order to reduce this health care disparity.

The field is in need of addressing the issue of trauma related assessment among African American clients with SMI receiving public mental health services so that PTSD may be detected and successfully addressed. Among 184 African American SMI clients in an urban community mental health center, it was found that 43% of them met criteria for PTSD but only 11% had a chart diagnosis of PTSD (Schwartz et al., 2005). Clinicians often fail to recognize PTSD in African American clients with SMI, which may contribute to poor treatment outcomes.

This descriptive study examined particular types of trauma experienced by African American clients with documented SMI and probable PTSD based on the *DSM-IV* PCL. The primary objective was to investigate key variables (trauma exposure, PTSD symptom severity, and clinical correlates of documented PTSD versus undocumented PTSD in medical records among African Americans diagnosed with SMI).

Method

The study protocol, informed consent, and all study-related materials were reviewed and approved by the Institutional Review Boards at Dartmouth Medical School and Rutgers University.

Setting

Study participants were clients with SMI receiving services at the Rutgers University—University Behavioral HealthCare (RUBHC), one of the largest mental health specialty providers in the United States, serving about 15,000 clients annually. Data was collected during the years 2007–2010. During this time, this system had several services, including outpatient and partial hospitalization clinics (five of which participated in the study), case management, residential programs, an emergency room, and an inpatient unit. The composition of the UBHC client base included about 80% of clients on Medicaid or Medicare and about 20% uninsured or self-pay clients. All clients accepted into services at RUBHC were required to meet New Jersey criteria for SMI, which included: a *DSM-IV* diagnosis; functional impairment related to mental illness within the past 3–6 months; and 2 or more episodes of use of mental health services of greater intensity than outpatient services (for example, inpatient, emergency, or partial hospitalization) during the past 2 years, or one episode lasting 3 months or more. It is noted that the *DSM-5* was not released at the time of this study, so a *DSM-IV* diagnosis was utilized.

The study sites included five outpatient and partial hospitalization programs located in three different cities in central and northern New Jersey. A comprehensive screening for trauma exposure and PTSD symptoms was implemented at these sites as part of a research study aimed at evaluating two different treatments for PTSD in people with SMI. Clients were not paid for their participation in the screening.

Screening Measures

An abbreviated 16-item version of the *Traumatic Life Events Questionnaire* (TLEQ) (Kubany et al., 2000) was used to screen lifetime trauma history for all clients at one of the five sites. This version of the TLEQ was used in previous studies to screen for trauma exposure in persons with SMI (Mueser et al., 2008). The TLEQ asks about the experience of traumatic events using wording that corresponds with the *DSM-IV* criterion A for PTSD. For each event on the scale, the client indicated whether they had ever experienced the event over their lifetime in a binary (yes/no) format (for example, "Has anyone threatened to kill you or seriously hurt you?").

The *PTSD Checklist for DSM-IV* (PCL) (Blanchard et al., 1996; Weathers et al., 1993) was used to screen and identify cases with probable PTSD, as well as to assess PTSD symptom severity. The PCL includes one question for each *DSM-IV* PTSD symptom, requiring the respondent to rate the severity of each symptom over the past month on a 5-point (1–5) Likert scale (range: 17–85). A total score of 45 or greater on the PCL was used to identify cases of probable PTSD during the initial screening (Weathers et al., 1993). The PCL has good test–retest reliability and convergent validity among persons with SMI (Grubaugh et al., 2007; Mueser et al., 2001). Because the data was collected prior to the publication of the *DSM-5* criteria for PTSD, the *DSM-IV* criteria was applied to the study. This study therefore utilized the *DSM-IV* PTSD Checklist (Weathers et al., 1993).

Procedure for Screening

From 1/12/2007 to 1/13/2011; clinicians conducted routine screening of trauma history and PTSD with their clients. This screening was either conducted at the second intake session for new clients or at regular sessions for clients who were already in treatment. When clients were grossly psychotic or suicidal, the screening was deferred until a time when the person was more clinically stable. The following script was used to introduce the screening and information about PTSD to clients:

It is very common for people to have experienced some very stressful and upsetting events. Even if these events happened a long time ago, they can still affect how a person thinks and feels, and how a person reacts to other people and situations many years later. People who have experienced a traumatic event, repeated traumatic events, or certain kinds of stress over a long period of time often have different mental health treatment needs than people who have not experienced trauma or chronic stress. Because of this, it can be helpful to you if your treatment providers are aware of your past experiences of trauma and chronic stress, and the way in which these may be still affecting you now. We would like you to try to answer the following questions. We want to see if any of these things, problems or complaints has happened to you. If you are not sure of an answer to a question, please make your best guess. If you have any questions, I would be happy to talk with you about them.

Clients first completed the TLEQ. If they indicated 'yes' to any of the 16-items, they then completed the PCL, based on the most upsetting event on the TLEQ. Clients with probable PTSD (PCL \geq 45) were then asked if they were willing to have their screening data and other pertinent clinical information provided to the

research team for possible participation in a treatment study. Clients who agreed then completed a consent form, and the results of the screening and other clinical information were then provided to the research team.

Chart Review

Data on primary and secondary psychiatric diagnoses, ethnicity, education level, and age were drawn from participants' medical records after they had provided consent.

Participants

Within a 48-month period, a total of 987 clients (including 404 African American clients) endorsed at least one traumatic event on the TLEQ, had a total PCL score of at least 45 indicating probable PTSD, had a chart diagnosis of an Axis I diagnosis, and expressed an interest in the study. Data are not available on screened individuals who did not show evidence of likely PTSD, as clinicians were instructed to seek consent for release of the information to the research team only if the participant showed evidence of probable PTSD and would be a candidate for targeted PTSD treatment. A previous article (Lu et al., 2013) reported data collected from 1/12/2007 to 8/2/2010 for 851 participants of all racial groups & among these participants, 362 participants were included in the present analysis. An additional 42 cases were added to this study from data collected after the analysis of Lu et al., 2013. The ethnic and diagnostic characteristics of the study sample were similar to those of clients from UBHC (demographic information available for four out of five participating sites was as follows: 42% African American and 58% non-African American; 22% with schizophrenia-spectrum disorders. Demographic information for study participants from these four sites was as follows: 47% African Americans and 53% non-African American; 17% with schizophrenia-spectrum disorders). The following analysis is based on the 404 African American participants.

Analysis

Data were analyzed using SPSS 27. Out of 404 cases, only 1 case had more than 10 missing data points for PCL, so this case was removed from analysis. Additionally, 35 data points out of 6,851 on PCL were replaced with series mean (.5%). Out of 404 participants, only 2 were missing trauma screening information. Only one other person was missing one value for the PCL scale, 1 out of 6,432 data points, which was replaced by series mean. We confirmed that PCL scores were normally distributed in the sample, despite our sample being restricted to persons with high scores. Descriptive statistics were calculated between trauma events and PTSD symptoms were derived. Linear regression was used to examine predictors of PTSD severity using a combination of demographic and trauma variables. Chi-square or t test analyses were run to identify differences between men and women. Linear regression was used to examine which combination of demographic and trauma variables was most strongly associated PTSD symptom severity.

Results

Table 1 summarizes the demographic and clinical characteristics of the African American study sample. The participants were predominantly female (69.8%), in their early 40s, and had completed high school. The most common principal Axis I diagnoses in clients' charts were major depressive disorder and other depressive disorders (32.2%), schizophrenia and other psychotic disorders (19.8%), and bipolar disorders I and II (19.3%). Of note, only 6.2% of the sample had PTSD listed as a primary diagnosis ($n = 25$, $N = 404$ with 4 cases missing diagnosis information), and 12.1% had PTSD as a secondary diagnosis in the medical record ($n = 49$). The 18.3% rate of PTSD documentation was low for this sample of probable PTSD cases. There were no significant differences in the rates of documentation for PTSD in the medical chart as a principal diagnosis, secondary diagnosis, or either; 4.9%, 9.0%, 13.9%, respectively, for male, 6.8%, 13.6%, and 20.4%, respectively, for female ($p_s > .05$; **Table 2**). Comparison of diagnostic groups on the documentation of PTSD indicated that a significantly smaller proportion of persons with a schizophrenia-spectrum disorder had a secondary chart diagnosis of PTSD (4.3%; 3 out of 70) than those with bipolar disorders (7.7%; 6 out of 78) or MDD (26.2%; 34 out of 130) ($\chi^2 = 20.974$, $p < .001$; **Table 4**).

Table 2 lists the total number of types of traumatic events reported by the participants on the TLEQ by gender. On average, participants reported experiencing nearly 8 or more types of traumatic events listed on the TLEQ. The most common traumatic event was the sudden death of a loved one (81.7%), which did not differ in frequency by gender. Car accidents, witnessing domestic violence, and childhood physical abuse were also reported at similar frequencies by both men and women. However, men more frequently experienced (and witnessed) robbery, assault by a stranger, combat, and accidents than women, who more often experienced domestic violence, childhood sexual abuse, adult sexual assault, and stalking.

Table 3 lists the traumatic events identified by participants as most distressing on the TLEQ, upon which the PCL was based.

Table 1
Demographics and Clinical Characteristics Participants (N = 404)

Demographic/clinical characteristics	N	%
Gender		
Male	122	30.2
Female	282	69.8
Psychiatric Diagnoses		
Schizophrenia/Schizoaffective	70	17.3
Major Depressive Disorder	130	32.2
Bipolar I Disorder	45	11.1
Bipolar II Disorder /Other Bipolar	33	8.2
Other Mood Disorders	60	14.9
Anxiety Disorder	13	3.2
PTSD	25	6.2
Other Psychotic Disorders	10	2.5
Adjustment disorders / Acute stress	5	1.2
Other (e.g., Eating Disorder)	6	1.5
Missing	4	1.0
Education (Mean \pm SD)	11.82 \pm 1.76	
Age (Mean \pm SD)	40.20 \pm 10.60	

Childhood sexual abuse was reported as the most distressing event by 29.5% of the African American clients with SMI, followed by sudden death of a loved one reported as the most distressing event reported by 24.4% of the sample. Gender differences were noted. Among women, the most distressing events were childhood sexual abuse (31.9%), sudden death of a loved one (22.8%), and being a victim of domestic violence (6.4%). Among men, the most distressing events were the sudden death of a loved one (22.0%), threatened by strangers (24%), and childhood sexual abuse (14.0%). Furthermore, among those 86 clients who reported sudden death of a loved one as the most distressing event, 18 (20.9%) of them reported experiencing the murder of a loved one, and 16 (18.6%) reported experiencing the sudden accidental death of a loved one. On average and across gender, the reported index trauma had occurred about 19 years prior to the screening ($M = 19.38$, $SD = 14.28$, range from .04–54.87). The reported age when index trauma occurred was during early adulthood ($M = 21.7$, $SD = 13.82$, range from 2.63 to 55.09), with no statistical differences between genders. The most distressing traumatic event, aka index trauma, was coded into seven categories: childhood sexual abuse, sudden death, adult sexual abuse, domestic violence, robbery, childhood physical abuse, and other. The analysis included 193 individuals who reported the year when the index event occurred. Time intervals between the index events and the time of screening were calculated. One-way ANOVA findings indicated that the elapsed time since the index event varied significantly according to the types of events [$F(6, 186) = 11.96$, $p = .000$]. The longest time interval since index event was childhood sexual abuse, which on average occurred 30 years prior ($SD = 12.14$, range= 4.26 to 54.9). The next longest time interval was domestic violence, which occurred 19.7 years prior ($SD = 12.95$, range= 1.89 to 39.55). Next, adult sexual assault took place 17.9 years prior ($SD = 11.12$, range= 3.22 to 35.0) and childhood physical abuse took place 17.9 years prior ($SD = 11.4$, range= 6.21 to 32.94). For sudden death, the mean time elapsed was 14.5 years ($SD = 1.89$, range= .04 to 45). Robbery was reported to occur 13.9 years prior ($SD = 9.83$, range= .65 to 39.96).

We also compared trauma exposure and PTSD symptoms for the three broad diagnostic groups [Schizophrenia/Schizoaffective versus Major Depressive Disorder (MDD) versus bipolar disorders (including Bipolar I, Bipolar II, and other bipolar disorders); **Table 4**]. Participants across three diagnostic groups did not differ on exposure to different types of trauma except on witnessing domestic violence with ($\chi^2 = 12.09$) and $p = .00$; 75.6% of people with bipolar disorders experienced witnessing domestic violence as a child compared to 69.2 for MDD and 50% for schizophrenia. This data suggests that African Americans with psychotic disorders were less likely to witness domestic violence compared to those with mood disorders. Further, those with psychotic disorders also displayed less severe PTSD symptoms, including less intrusion and hyperarousal, compared to those with MDD or bipolar disorders (see **Table 4**).

For this large sample of African American clients with PCL scores at or above 45, indicative of probable PTSD, the documentation rate was remarkably low, at 18.3%. Logistic regression analysis was performed to determine predictors for someone to have a PTSD diagnosis documented in his or her chart. The outcome variable is the presence or absence of a clinical diagnosis of PTSD, either in primary or secondary diagnoses. The independent variables

Table 2
Traumatic Events Reported on Abbreviated TLEQ by Gender (N = 402)

Event	Total (N = 402)		Male (n = 122)		Female (n = 280)		χ^2	P
	N	%	n	%	n	%		
Car Accident	139	34.4	45	36.9	94	33.6	0.41	0.52
Other Accident	113	28.0	44	36.1	69	24.6	5.49	0.02*
Warfare	30	7.4	19	15.6	11	3.9	16.69	0.00*
Sudden Death	330	81.7	104	85.2	226	80.7	1.19	0.28
Robbery	204	50.5	81	66.4	123	43.9	17.16	0.00*
Stranger Assault	203	50.2	85	69.7	118	42.1	25.76	0.00*
Witness Stranger Violence	222	55.0	76	62.3	146	52.1	3.54	0.06
Being Threatened	256	63.4	84	68.9	172	61.4	2.03	0.16
Child Physical Abuse	201	49.8	68	55.7	133	47.5	2.31	0.13
Witnessing Domestic Violence as Child	270	66.8	77	63.1	193	68.9	1.30	0.25
Experiencing Domestic Violence	268	66.3	64	52.5	204	72.9	15.91	0.00*
Child Sexual Abuse	259	64.4	62	50.8	197	70.4	14.15	0.00*
By Older People	244	60.4	60	49.2	184	65.7	9.74	0.00*
By Peer	177	43.8	39	32	138	49.3	10.34	0.00*
Adult Sexual Abuse	141	34.9	19	15.7	122	43.6	28.78	0.00*
Being Stalked	203	50.2	48	39.3	155	55.4	8.72	0.00*
Other	164	40.6	63	51.6	101	36.1	8.53	0.00*
Lifetime Sexual Abuse	275	68.4	65	53.3	210	75.0	17.60	0.00*
Lifetime Physical Abuse	348	86.6	111	91.0	237	84.6	3.44	0.06
Lifetime Family Physical Abuse	317	78.9	87	71.3	230	82.1	5.29	0.02*
PTSD as Principal Diagnosis	25	6.2	6	4.9	19	6.8	0.49	0.49
PTSD as Secondary Diagnosis	49	12.1	11	9.0	38	13.6	1.54	0.22
PTSD Chart Diagnosis	74	18.3	17	13.9	57	20.4	2.24	0.13

	M	SD	M	SD	M	SD	t	P
Total Types of Events	7.87	3.40	8.00	3.16	7.82	3.50	0.49	0.62
PCL Total	63.29	10.43	62.03	10.85	63.84	10.22	-1.60	0.11
Intrusion	18.82	4.31	18.56	4.34	18.93	4.30	-0.78	0.44
Avoidance	25.07	18.97	24.50	4.78	25.32	4.88	-1.46	0.15
Hyperarousal	18.97	3.98	18.56	3.97	19.15	3.98	-1.29	0.20

Note. Results are based on n = 402 as 2 participants were missing screening data.

consisted of gender, age group (18–24, 25–35, and 36+), education group (<HS, =HS, >HS), childhood sexual abuse as index trauma, time since index trauma happened (>15 years or not), diagnosis of schizophrenia, diagnosis of bipolar disorder or not, total trauma exposure ≥ 8 types, and PCL total ≥ 65 . With the outcome variable being a documented chart diagnosis of PTSD, the logistic regression effects were significant for diagnosis of schizophrenia or not ($B = -1.87, SE = .61, Wald = 9.29, df = 1, p = .002, Exp[B] = .15$), diagnosis of bipolar disorder or not ($B = -1.43, SE = .46, Wald = 9.72, df = 1, p = .002, Exp[B] = .24$), and total PCL score greater than 65 ($B = .62, SE = .28, Wald = 4.83, df = 1, p = .028, Exp[B] = 1.86$). The overall equation was significant (Nagelkerke $R^2 = .16, \chi^2 = 39.95, df = 9, p < .001$). In other words, having a diagnosis of schizophrenia/schizoaffective or bipolar disorder would make it less likely to have a chart diagnosis of PTSD, possibly due to the overlap of symptoms in these three diagnoses. Vice versa, for those with severe symptoms of PTSD with high PCL scores, have a better chance of having a documented chart diagnosis of PTSD.

Finally, the clinical correlates of detection or nondetection of PTSD in the medical chart are presented in Table 5. Analysis compared trauma exposure, eight different types of index trauma, age when trauma occurred, time elapsed since index trauma, PTSD symptomology between the group with chart diagnosis of PTSD

and the group without. Those detected PTSD cases had higher PCL score, higher intrusion score, higher hyperarousal, but not higher avoidance score. This indicates that many avoidance symptoms in PTSD may be underreported by clients or overlooked by clinicians when reported, but rather patients may more readily report or clinicians may be less likely to overlook more salient symptoms of PTSD like nightmares, intrusive memories, being triggered, hypervigilance, irritability/anger, concentration difficulties, and so forth

Linear regression was used to examine which combination of demographic and trauma variables best predicted PTSD symptom severity. For this analysis, we used a stepwise approach. Variables included TLEQ total score, gender, age, diagnosis (dummy coded so that psychotic disorders were contrasted to all nonpsychotic disorders), and education. The overall equation was significant ($R^2 = .07, F[5, 380] = 5.46, p < .001$) and the final equation included only one significant predictor: sum of traumatic events (TLEQ total) ($\beta = .20, t = 4.01, p < .001$).

Discussion

The insufficient attention to the screening of trauma and PTSD of people with SMI in community mental health centers has been established in previous research (Cusack et al., 2004; Zammit et

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Table 3
Traumatic Events Identified as Most Distressing by Gender ($N = 352$)

Event	Total ($N = 352$)		Male ($n = 100$)		Female ($n = 252$)		χ^2	P
	n	%	n	%	n	%		
Childhood Sexual Abuse	104	29.5	14	14	90	31.9	81.81	0.000
Sudden death of loved one	86	24.4	22	22	64	22.8		
Threatened by Stranger	55	15.6	24	24	31	10.7		
Experiencing Domestic Violence	28	8	2	2	26	6.4		
Stranger Assault	24	6.8	14	14	10	3.5		
Adult Sexual Abuse	11	3.1	2	2	9	3.2		
Childhood Physical Abuse	10	2.8	3	3	7	2.5		
Witnessing Stranger Violence	10	2.8	7	7	3	1.1		
Robbery	8	2.3	3	3	5	1.8		
Car Accident	6	1.7	5	5	1	0.4		
Other Accident	5	1.4	2	2	3	1.1		
Witnessing Domestic Violence as a Child	3	0.9	0	0	3	1.1		
Warfare	2	0.6	2	2	0	0		
	M	SD	M	SD	M	SD		
Age at most distressing event (M, SD)*	21.7	13.82	23.97	14.01	20.73	13.69	1.49	0.14
Years since most distressing event (M, SD)*	19.38	14.28	17.41	14.14	20.20	14.31	-1.24	0.22

Note. "Other" includes but not limited to loss of custody, symptoms of mental illness, hostage or kidnap, incarceration, arrest, imprisonment, or multiple trauma, being bullied, surgery threatened, or experiencing 9/11. * $N = 194$ due to missing data; There were no significant differences for index trauma, time since index trauma, age when index trauma occurred or rate of documented PTSD (documented vs. undocumented PTSD in medical chart) across diagnostic groups (schizophrenia/schizoaffective vs. MDD vs. bipolar disorders).

al., 2018). This is the first study of which we are aware that examined trauma and PTSD in a large sample of African American clients with SMI served by community mental health centers. This study focused on the rate and correlates of undiagnosed PTSD in African Americans with SMI and presumptive PTSD.

In this sample of 404 African American participants who scored positive for probable PTSD (PCL greater than or equal to 45), 18.3% had PTSD diagnosed in their medical chart, which was consistent with our hypothesis. A diagnosis of schizophrenia/schizoaffective disorder was inversely related to the detection of PTSD in the chart. Consistent with the hypothesis, African American clients with psychotic disorders (Schizophrenia/Schizoaffective) had the lowest documented rate of PTSD, with 4.3% having PTSD documented as a chart diagnosis compared to the corresponding rates

of 26.2% among MDD group and 7.7% among bipolar disorders. MDD was associated with higher likelihood of detection of PTSD, however, the detection rate remained low. Client age and gender did not adversely affect the detection of PTSD, and detection rates remained low across the board. These findings point to the need for more routine assessment of trauma history and PTSD in African American with SMI receiving community mental health services. African American clients with schizophrenia/schizoaffective disorder are most likely to be missed as having PTSD. This is possibly because the presence of hallucinations and delusions might overshadow recognition of PTSD symptoms. Screening of PTSD for clients with psychotic disorders is especially recommended as it provides a mean for improving detection of PTSD in this population.

Table 4
Trauma Exposure and PTSD Severity Among African American Clients With $PCL \geq 45$ Across Diagnostic Groups

Group	Total ($N = 277$)		Schizophrenia/ Schizoaffective ($n = 70$)		Major Depression ($n = 130$)		Bipolar ($n = 78$)		χ^2	P
	N	%	N	%	N	%	N	%		
PTSD as Secondary Diagnosis	43	15.5	3	4.3	34	26.2	6	7.7	20.97	0.00*
	M	SD	M	SD	M	SD	M	SD	F	P
Total Types of Events	7.79	3.31	7.06	3.32	7.78	3.36	8.49	3.61	3.23	0.04*
PCL Total	62.98	10.48	60.47	10.37	64.69	10.29	62.4	10.48	3.92	0.02*
Intrusion	18.65	4.28	17.64	4.32	19.37	4.21	18.37	4.2	4.03	0.02*
Avoidance	25.07	4.89	24.58	4.66	25.7	4.84	24.48	5.14	1.79	0.17
Hyperarousal	18.83	3.96	17.97	3.89	19.42	3.78	18.65	4.22	2.98	0.05*

Note. Participants across three diagnostic groups did not differ on exposure to different types of trauma, except on witnessing domestic violence with ($\chi^2 = 12.09$) and $p = .00$). 75.6% of people with bipolar disorders experienced witnessing domestic violence as a child compared to 69.2 for MDD and 50% for schizophrenia.

Table 5
Trauma Exposure and PTSD Symptom Severity Among African American Clients With PCL ≥ 45 by PTSD Chart Diagnosis

Trauma	Total (n = 402)		Detected PTSD (n = 74)		Undetected PTSD (n = 328)		χ^2	p
	N	%	n	%	n	%		
Car Accident	139	34.6	26	35.1	113	34.5	0.01	0.91
Other Accident	113	28.1	23	31.1	90	27.4	0.40	0.53
Warfare	30	7.5	6	8.1	24	7.3	0.06	0.82
Sudden Death	330	82.1	64	86.5	266	81.1	1.19	0.28
Robbery	204	50.7	43	58.1	161	49.1	1.97	0.16
Stranger Assault	203	50.5	40	54.1	163	49.7	0.46	0.50
Witness Stranger Violence	222	55.2	48	64.9	174	53.0	3.41	0.07
Being Threatened	256	63.7	48	64.9	208	63.4	0.06	0.82
Child Physical Abuse	201	50.0	40	54.1	161	49.1	0.60	0.44
Witnessing D.V.	270	67.2	53	71.6	217	66.2	0.82	0.37
Experiencing D.V.	268	66.7	48	64.9	220	67.1	0.13	0.72
Child Sexual Abuse	259	64.4	51	68.9	208	63.4	0.80	0.37
<i>by Adult</i>	244	60.7	48	64.9	196	59.8	0.66	0.42
<i>by Peer</i>	177	44.0	34	45.9	143	43.6	0.14	0.71
Adult Sexual Abuse	141	35.1	28	37.8	113	34.5	0.30	0.58
Being Stalked	203	50.5	46	62.2	157	47.9	4.94	0.03*
Other	164	40.8	30	40.5	134	40.9	0.00	0.96
Lifetime Sexual Abuse	275	68.4	54	73.0	221	67.4	1.00	0.32
Lifetime Physical Abuse	348	86.6	63	85.1	285	86.9	0.08	0.78
Lifetime Family Physical Abuse	317	78.9	58	78.4	259	79.0	0.00	0.98
Index Trauma Child Sexual Abuse	88	21.9	19	25.7	69	21.0	0.81	0.37
Index Trauma Sudden Death	79	19.7	12	16.2	67	20.4	0.64	0.42
Index Trauma D.V.	268	66.7	48	64.9	220	67.1	0.09	0.77
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>P</i>
Time Since Index Trauma*	19.38	14.3	16.11	13.7	20.22	14.3	1.63	0.11
Age at Index Trauma**	21.68	13.8	25.53	14.84	20.71	13.43	-1.96	0.051
Total Types of Events	7.87	3.4	8.44	3.54	7.74	3.36	-1.61	0.11
PCL Total	63.29	10.44	66.76	9.94	62.51	10.40	-3.20	0.001*
Intrusion	18.82	4.31	20.23	3.97	18.5	4.32	-3.15	0.002*
Avoidance	25.07	4.86	25.76	4.5	24.91	4.93	-1.29	0.20
Hyperarousal	18.97	3.98	19.91	3.61	18.76	4.03	-2.16	0.03*

Note. *N = 194; Documented = 39; Undocumented = 155. **N = 194; Documented = 40; Undocumented = 154.

The clinical correlates of documented versus undocumented PTSD cases were compared. Documented PTSD cases distinguished itself from undocumented PTSD cases by more severe PTSD symptoms, especially on intrusion and hyperarousal symptoms, but not avoidance symptoms. Perhaps the saliency of intrusive symptoms such as nightmares or triggered memories and saliency of hyperarousal symptoms such as aggression, startle response, and hypervigilance are more recognizable by clinicians than avoidance symptoms such as numb affect and avoidance of certain activities/people/places.

Results indicate that 66% of the participants experienced domestic violence, 64.4% experienced childhood sexual assault, with 60% having experienced childhood sexual abuse by someone five years older, and 44% having experienced childhood sexual abuse by peers, more than half of the participants experienced robbery, and/or physical assault, and/or being threatened or witnessed community violence. 37% experienced adulthood sexual assault. Lifetime rate of sexual abuse (CSA and ASA) was 68.4% (53.3% among males, 75.0% among females). It is interesting that interpersonal violence occurred most frequently by close family members, not by strangers. Lifetime physical abuse (including stranger assault, childhood physical abuse, and domestic violence) was experienced by 86.6% of the sample (did not differ between

genders). Lifetime physical abuse from family members (childhood physical abuse and domestic violence) was 78.9% (71.3% among males, 82.1% among females). In this study, rates of exposure to traumatic events were higher than past research examining trauma in cohorts with SMI including schizophrenia (Goodman et al., 2001; Mueser et al., 1998). For example, past studies found the rate of childhood sexual abuse in SMI samples ranged from 18.5% to 44.6% (Álvarez et al., 2011; Mueser et al., 1998), which is lower than the rate of 64% among African Americans in this study (55.8% vs. 74.5% for males and females, respectively). Studies of adult sexual abuse in SMI clients found rates between 24% and 25% (Mueser et al., 1998, 2004), compared to the 34.9% found in this study (15.7% vs. 43.6% for males and females, respectively).

On average, African American clients with SMI and probable PTSD reported experiencing 8 types of different types of trauma. The level of trauma exposure is higher than the average level of exposure of 7 types of trauma previously reported on clients with SMI (Lu et al., 2013). This rate is much higher than what was reported among veteran clients with schizophrenia with probable PTSD (70% African American), for whom average exposure to two to three different types of traumatic events were reported (Calhoun et al., 2007). African Americans with psychotic disorders significantly scored lower on total trauma exposure, with on

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average exposure to 7 types of trauma compared to 8 types for those with severe mood disorders ($p = .04$).

Álvarez et al. (2011) found that childhood abuse in people with SMI was highly prevalent, with nearly half of the sample having experienced abuse in childhood, which was associated with more severe psychosis and increased suicidality. Similarly, in this sample of African American clients, 65% experienced childhood sexual abuse, and 30% reported their most distressing trauma was childhood sexual abuse.

Sudden death of a loved one was widely experienced by 81.7% of the participants and was ranked as the leading cause of PTSD in the male participants (22%) and the second leading cause of PTSD in the female participants (23%). Our findings highlight the salience of the sudden death through violence, suicide, or accident of a loved one among African American clients with SMI, and raises the issue of increased vulnerability to complicated grief due to the presence of comorbid PTSD. The high frequency of unexpected sudden death of a loved one including violent death in this sample of African American clients with SMI, and its association with PTSD symptom severity, raises the question of the related disorder of Prolonged Grief Disorder (PGD; Prigerson et al., 2008). A sudden, unexpected death can lead to a diagnosis of PGD (Goldsmith et al., 2008). There is significant overlap between PTSD, PGD, and depression (Bonanno et al., 2007; Burke et al., 2010; Craig et al., 2008). African Americans were far more likely to lose a loved one to homicide, reported less use of professional services, and spent fewer hours talking about a loss overall despite their higher reported complicated grief symptoms (Alim et al., 2006; Laurie & Neimeyer, 2008). In this sample, 4.5% of African American clients with presumptive PTSD experienced murder of their loved one as their most distressing event. Homicide has a high psychological impact on African Americans. The surviving family members often either blamed themselves or became socially disenfranchised by “invalidation, silencing and ostracism” (Piazza-Bonin et al., 2015; p. 420). Sharpe and Boyas (2011) identified some coping strategies for grief related to homicide that are culturally specific to African Americans including spiritual coping and meaning making, keeping connections with the deceased, collective coping, and grief concealment. The findings support O’Hare et al.’s (2012) suggestion that African American clients with SMI may benefit from some form of culturally sensitive counseling that targets PTSD and complicated grief reactions in relation to the sudden death of a loved one.

Several limitations of the present study should be noted. We used data from African American clients with SMI receiving community mental health services. The findings, therefore, may not be generalizable to African American clients with SMI in other treatment settings, such as in- independent practice treatment settings or those not in treatment. The findings are limited by the use of PCL, which is a self-report measure of PTSD symptoms for *DSM-IV*. Replications using PTSD Checklist for *DSM-5* (PCL-5; Blevins et al., 2015; Weathers et al., 2013) would be of critical importance.

Implications

Our findings highlight the need for culturally sensitive counseling, especially in relation to childhood sexual abuse and sudden death of loved ones for African American clients, which are the leading causes of PTSD in this population. Findings here suggest high rates of trauma exposure and exposure to multiple types of

trauma among African American clients with SMI. The present findings suggest that PTSD is frequently not documented in medical charts within this population, thereby treatment may not include plans to address PTSD. Screening for PTSD is especially recommended for those with psychotic disorders and bipolar disorders as PTSD symptoms in these patients are often overlooked. Future studies may address the need to routinely screen for trauma exposure, PTSD and possibly the presence of complicated grief among African American clients with SMI. In PTSD treatment studies, favorable treatment outcomes despite a higher attrition rate in African American clients has been reported (Lester et al., 2010). There are several strategies that may improve ethnic minority retention in treatment studies, including focus groups with potential participants to inform treatment. Identifying participants’ therapeutic goals at the time of counseling and addressing treatment concerns are ways of enhancing treatment among ethnic/racial minority patients (Wagner et al., 2005). Research has shown the efficacy of cultural adaptations such as discussing race-related experiences, racism, the importance of pairing African American clients with African American therapists, or using groups where a majority of members are African American (Alim et al., 2006; Jones et al., 2000; Williams et al., 2007).

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