



# Research Bulletin

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## Probable posttraumatic stress disorder in a sample of urban jail detainees

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Jails in the United States house large numbers of detainees who have urgent public and behavioral healthcare needs as well as various serious social, economic, and personal problems. Jails are often the primary (or only) settings for medical, psychiatric, and substance abuse treatment (McDonnell et al., in press). These settings provide unparalleled opportunities for studying and treating some of the most troubled and troublesome concentrations of people in the country (Watson, Hanrahan, Luchins, and Lurigio, 2001).

The earliest epidemiological studies of psychiatric disorders in the United States found an overrepresentation of people with severe mental illness living in underclass communities, stemming in part from the stressors that arise from poverty and its onerous sequelae (e.g., Hollingshead and Redlich, 1958). Detainees generally live in decidedly disorganized and disorderly environments that are plagued by unemployment, housing instability, crime, violence, and other adverse conditions that can precipitate episodes of psychiatric illness among those with genetic or other susceptibilities (Lurigio, 2012). These overwhelmingly impoverished communities place detainees at high risk of exposure to a host of events that can lead to trauma and its psychiatric concomitant known as posttraumatic stress disorder (PTSD). This study is one of the few to investigate probable PTSD among men in jail.

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### Occurrence and prevalence of PTSD

Long recognized as a condition afflicting war veterans, PTSD first appeared as a formal diagnosis in the third edition of the American Psychiatric Association (1980). PTSD is classified as an anxiety disorder and can only be diagnosed following direct or vicarious exposure to a traumatic event. Research on PTSD has suggested varying degrees of vulnerability to the disorder (i.e., reasons why some trauma victims develop PTSD and others do not) (Astur et al., 2006). Pre-existing conditions (e.g., psychological adjustment) as

well as factors that are present during (e.g., the degree to which a person's life was threatened, actual loss, pain) and after the occurrence of the traumatic event (e.g., the availability of crisis services) play a role in whether a trauma victim experiences the symptoms of PTSD or not (Schnurr, Lunney, and Sengupta, 2004; Taylor, 2010). Hence, a complicated interaction of variables predisposes a victim to PTSD.

Experiences in the aftermath of trauma can protect victims from PTSD; specifically, trauma-related treatments and interventions as well as a strong network of social support immediately following the event can decrease the likelihood of PTSD (Litz and Maguen, 2007). Early interventions, however, are often unavailable or unfeasible. Nevertheless, psychotherapeutic and psychopharmacological strategies can be effective in reducing the symptoms of PTSD in both acute and chronic cases (Gulliver and Steffen, 2010). Therefore, the implementation of such interventions in jails, where rates of PTSD are elevated, could be effective in alleviating PTSD symptoms among detainees already in treatment for related psychiatric and substance use disorders.

Studies have employed various screening tools to estimate the prevalence of PTSD in different populations. Lifetime prevalence for PTSD in the general population ranges from 1% to 14%, depending on the population sampled and data collection methods utilized (e.g., Astur et al., 2006; Kessler, Sonnega, Bromet, Hughes, and Nelson, 1995; Kessler et al., 2005). In general, investigations have shown that women, racial minorities, urban dwellers, and substance users have elevated rates of PTSD. For example, data suggest that women have at least double the rate of PTSD as men (e.g., Komarovskaya, Loper, Warren, and Jackson, 2011). One prevalence study reported a lifetime PTSD rate of 33% among African Americans (Alim et al., 2006). Other prevalence studies have reported a lifetime PTSD rate of 24% among urban populations (Breslau and Davis, 1992; Breslau, Davis, Andreski, and Peterson, 1991). Moreover, PTSD is often found among people with substance use disorders. Specifically, estimates suggest that nearly 40% of men in substance abuse treatment programs have a diagnosis of PTSD (Najavits, 2006).

Rates of PTSD in criminal justice populations are higher than in the general population, which is attributable, in part, to several risk factors that are common

among criminally involved people such as minority status, childhood abuse and neglect, poverty, and drug-seeking behavior (Kubiak and Rose, 2007; Schnurr et al., 2004). The rate of current PTSD among male adult prisoners ranges from 4% to 21% (e.g., Brink, Doherty, and Boer, 2001; Butler and Allnut, 2003). The rate of current PTSD is even higher among female inmates, ranging from 15% to 61% (Butler and Allnut, 2003; Hutton et al., 2001; Reichert and Bostwick, 2010). One study found that 79% of female inmates had co-occurring PTSD and substance use disorder (Wolff et al., 2011). Studies of veterans in jails have reported current PTSD rates that vary between 17% and 39% (Saxon et al., 2001; White, Mulvey, Fox, and Choate, 2011).

### **Overview: Current study**

The present study was undertaken to fill the gap in knowledge and understanding of probable PTSD among jail detainees. Trauma research in the field of criminal justice and corrections has been conducted largely among women, combat veterans, and victims of criminal sexual assault. Scant research has explored the prevalence of PTSD in nonveteran jail populations. In contrast, the current research focused on civilian men and explored, in depth, the effects of trauma in a sample of male detainees in a jail-based drug treatment program located in the Cook County Department of Corrections (CCDOC), which is the second-largest single-site jail facility in the United States. This study was designed to contribute to knowledge in the area of addiction and trauma, and to suggest new directions in treatment for detainees with substance use problems. The present research also was undertaken to foster the creation of strategies for trauma-informed drug assessment and treatment services in jails and in-custody therapeutic community (TC) programs.

The participants in this study were clients in the Integrated Multistage Program of Assessment and Comprehensive Treatment (IMPACT), which is based on a TC model that was modified for implementation in a secure jail setting. Administered by the WestCare Foundation, the IMPACT program is a short-term, jail-based TC that provides intensive substance abuse treatment and other services to male detainees. These interventions are intended to help clients become sober, eschew contact with antisocial members of the community, develop more effective communication

**Table 1**  
**Sample demographics**

Characteristics	Total (n=117)
Mean age (years)	33
<b>Race</b>	
White	10.3%
Black	72.6%
Asian	0.0%
American Indian or Alaska Native	0.9%
Other	11.1%
Unknown	5.1%
<b>Ethnicity</b>	
Latino/Hispanic	17.1%
Non-Latino/Hispanic	79.5%
Unknown	3.4%
<b>Marital status</b>	
Never married	63.2%
Married	12.8%
Separated	4.3%
Divorced	4.3%
Widowed	2.6%
Unknown/other	12.9%
<b>Education</b>	
Elementary (1-8)	7.7%
Some high school (9-12)	23.9%
High school graduate	13.7%
GED	18.8%
Some college or some vocational school	14.5%
Diploma or certificate trade school, community college	12.8%
Four-year college degree	2.6%
Some graduate school	0.0%
Graduate or professional degree	0.0%
Unknown	6.0%
<b>Current employment</b>	
Yes	42.7%
No	54.7%
Unknown	2.6%
<b>Self-report health</b>	
Excellent	21.4%
Good	56.4%
Average	15.4%
Below average	4.3%
Very poor	0.9%
Unknown	1.7%

skills, and learn pro-social behaviors in order to reduce rates of substance use disorders, criminal activity, and recidivism. The IMPACT program is funded through the CCDOC and licensed by the Illinois Division of Alcohol and Substance Abuse. Data for the current study included demographic characteristics and criminal histories as well as results from the administration of three established psychometric tools: the Brief Jail Mental Health Screen, the PTSD Checklist—Civilian Version, and the Life Events Checklist. Qualitative interviews were also conducted with a sample of six detainees who completed these tools.

## Materials and methods

### Participants

Participants were men enrolled in the CCDOC/IMPACT program, which serves approximately 168 detainees daily. Most of these detainees are awaiting court appearances to determine their case dispositions. Participants may volunteer for the IMPACT program; however, nearly all (95%) are mandated by the court to receive services as a condition of pretrial detention. Successful completion of the program could be regarded as a mitigating factor at sentencing. All IMPACT program clients have been assessed with a substance use disorder and meet the standards to be housed in the jail's minimum or medium security divisions. Detainees with previous or pending charges for murder or sexual offenses are ineligible for the program.

A total of 117 detainees participated in the study. The typical participant was 33 years old (average age), unmarried (70%), and unemployed (55%). Most were African American (73%), with a high school diploma or GED (62%). The vast majority (78%) reported that they were in excellent or good health. Participants had an average of 30 previous arrests—the majority for non-violent offenses. Specifically, all participants had at least four arrests; previous arrests included drug offenses (29%), property offenses (19%), and violent offenses (15%). Arrest history information was missing for ten participants (8% of the sample). The demographic characteristics of the study sample closely matched those of IMPACT program clients overall (Lurigio, 2012; Lurigio et al., 2011) (*Table 1*).

Nearly half (46%) of the participants characterized their drug problems as “considerably” or “extremely” serious. Detainees were asked to indicate which drug

**Table 2**  
**Drug problem and drug treatment**

Characteristics	Total (n=117)
<b>Most serious substance of abuse</b>	
Alcohol	27.4%
Marijuana/hashish	24.8%
Heroin	9.4%
Crack/freebase	6.8%
Cocaine	4.3%
Heroin and cocaine	4.3%
Hallucinogens/LSD/PCP/psychedelics/mushrooms	2.6%
Methamphetamine	1.7%
Amphetamines	0.9%
Multiple drugs	14.5%
None	3.4%
<b>Seriousness of drug problem</b>	
Not at all	14.5%
Slightly	20.5%
Moderately	17.9%
Considerably	21.4%
Extremely	24.8%
<b>Drug treatment episodes</b>	
Never	56.4%
Once	19.7%
Twice	12.8%
Three times	2.6%
Four or more times	8.5%
<b>Importance of drug treatment</b>	
Not at all	2.6%
Slightly	10.3%
Moderately	7.7%
Considerably	17.1%
Extremely	62.4%

they deemed most problematic. They specified alcohol (27%), marijuana/hashish (25%), and heroin (9%); 14% of the sample identified “multiple drugs” as most problematic. A large majority (80%) of the participants indicated that drug treatment was “considerably” or “extremely” important to them. Nonetheless, more than half (56%) had never participated in drug treatment services before they enrolled in IMPACT (Table 2).

**Materials**

As we noted above, three well-known, validated, and standardized tools were employed to measure the

prevalence of mental health problems and exposure to potentially traumatic events: the Brief Jail Mental Health Screen (BJMHS), the Posttraumatic Stress Disorder Checklist— Civilian Version (PCL-C), and the Life Events Checklist (LEC). Participants also completed a self-report survey that included questions on their demographic characteristics, employment record, and medical and substance use histories. Substance use questions were extracted from the Texas Christian University Drug Screen II, a validated drug screening tool widely used in criminal justice settings (Knight, Simpson, and Hiller, 2002). In addition, qualitative interviews were conducted with detainees in order to obtain a richer and more textured understanding of the possible causes of trauma and mental health problems, the nature and extent of trauma exposure, the effects of trauma, and strategies to cope with trauma.

**Procedure**

The standardized instruments and the self-report survey were administered to all adult male detainees who were in attendance in the CCDOC/IMPACT program on a single day in August 2012. The study materials were administered in a single day in order to reach as many detainees in the CCDOC/IMPACT program as possible while minimizing disruptions to program services or jail operations. The distribution of study materials during one session also ensured access to an entire census or cohort of detainees on the tier. The jail’s population constantly fluctuates, so detainee movements into, out of, and among jail divisions often occur with little or no notice to service or treatment providers. Detainees are transported from their cells or tiers for various reasons, such as court dates, medical examinations, and visits, as well as library or commissary passes.

The day selected for the study was no different from any other day in the division with respect to client composition and program services. Hence, no evidence suggests that the sample was systematically biased or that the activities on the tier differed remarkably from those of any other day. Detainees who volunteered for participation signed Institutional Review Board approved informed consent forms, which were read to them. Informed consent forms also stated that the participants might be contacted later with a solicitation to participate in an in-depth interview. Furthermore, the informed consent form noted

that the participants could contact their counselors if the completion of the survey or the interview elicited emotional distress.

Surveys were distributed by a researcher and completed by the participants themselves. All instruments were distributed to each detainee in a manila envelope. A linked, numeric identifier, known only to two researchers [one from WestCare and one from the Illinois Criminal Justice Information Authority (ICJIA)], was on each envelope and on the survey and instruments used in the study. Detainees placed the completed survey and instruments in the manila envelope, which was sealed and handed to the WestCare staff member, who locked the manila envelopes in a secure space.

All survey and instrument items were read aloud due to the low reading and literacy levels among CCDOC detainees. Detainees younger than 18 (n=2) and those who spoke no or poor English (n=3) were ineligible for the study. Eighteen detainees were absent from the division during the study for several reasons, including court appearances, medical appointments, and commissary visits. In addition, 26 detainees declined to participate in the research and two only partially completed the surveys, resulting in a participation rate of 70%, determined by dividing the number of participants (n = 117) by the program's daily census of 168. Accounting for those who were absent from the program for expectable, predictable reasons or ineligible for the study, the response rate was 81%.

Case studies were employed to plumb the complexity of trauma and its varying causes and manifestations among male detainees. Such detailed information was unattainable through quantitative measures.

The case studies explored how and why detainees might experience trauma-inducing events and symptoms, offering a richer, more balanced and comprehensive assessment of PTSD and other mental health problems among jail detainees. The qualitative interviews explored the putative causes of trauma and related mental health problems, the types of traumatic events and degree of trauma exposure, the effects of trauma, and participants' attempts to cope with the trauma.

Researchers completed in-depth interviews with 6 of the 117 surveyed detainees. Based on their sur-

vey responses, 16 potential interviewees were drawn from the 117 detainees who had completed the survey instruments: 4 respondents in need of a further mental health evaluation and high probable PTSD severity scores and high traumatic life events (2 from this group were interviewed); 4 respondents with high trauma events and low probable PTSD severity scores (1 from this group was interviewed); 4 respondents in need of further mental health evaluation and high probable PTSD scores and low traumatic events (2 from this group were interviewed); and four respondents in need of a further mental health evaluation and low traumatic events and low probable PTSD severity score (1 from this group was interviewed).

Of those 16, 6 were interviewed, four were no longer in the jail, one was in court when he was to be interviewed, 1 declined to be interviewed, and 4 were not approached for an interview because the quota for the total number of interviewees had been reached. The men participating in the qualitative interviews ranged in age from 19 to 48; the average age was 30. Three were African American, one was Middle Eastern, and two were Latino. Subjects of the case studies were interviewed in a private office of WestCare staff in Division VI of the Cook County Jail. The case studies were audio-recorded and transcribed. The WestCare researcher analyzed the data. All components of the study were reviewed and approved by an Institutional Review Board.

### *Criminal histories*

Participants' criminal histories were provided by ICJIA through the Criminal History Record Information (CHRI) System. These records were derived from the Illinois State Police's Computerized Criminal History (CCH) System, which is the state's central repository for criminal history record information. Using name and date of birth, histories of arrests were obtained in an electronic format for all of the men in the study. The ICJIA's access to this information—referred to as the 'Ad Hoc connection'—is limited to an offline copy of the live database, which renders matches on name and date of birth, instead of on positive biometric identifiers, such as fingerprints. Hence, records might be missing due to processing errors, misidentifications, or omissions. In those instances, an official state criminal history record is missing, and therefore the record is incomplete.

*Statistical analyses*

Frequency analyses were performed to describe participants’ demographic characteristics and criminal histories; self-reported type and severity of drug use; and scores on the BJMHS, PCL-C, and LEC, which measured the need for a further mental health evaluation, probable PTSD, and lifetime traumatic experiences, respectively. Logistic and linear regression analyses were performed to learn which participant characteristics, if any, predicted probable PTSD severity, being symptomatic for PTSD, or need for further mental health evaluation. PCL-C scores were examined in two ways: whether the participant was symptomatic or non-symptomatic for PTSD as well as by the PCL-C total severity score. Cases that were missing data were excluded from the regression analysis in a list wise deletion process. An atheoretical approach was used to examine the qualitative data, searching for common themes on exposure, reactions, and adaptations to trauma.

**Results**

*Screening for trauma and mental health problems*

**Prevalence of probable PTSD and traumatic experience**

The PCL-C can be scored two ways. First, a total PTSD severity score between 17 and 85 can be calculated. In the current sample, total scores ranged from 17 to 85, with an average score of 38.44 (SD = 14.27). Research suggests that cutoff scores should be adjusted for different settings and populations, and that a score of 50 or higher should be used to identify likely PTSD cases among people who have experienced combat (Weathers, Litz, Herman, Huska, and Keane, 1993). A cutoff score for incarcerated populations has not yet been calibrated; thus, a cutoff score of 50, which is a conservative threshold for PTSD, was used in the analyses. Based on the cutoff score, 21% of the sample would likely meet the criteria for a diagnosis of probable PTSD.

Second, an individual is identified as symptomatic or nonsymptomatic based on reports of being bothered moderately, quite a bit, or extremely by symptoms of PTSD (DSM criteria). By this indicator, 26% of participants were symptomatic for probable PTSD. Specifically, 48% of respondents reported symptomatic levels of being “super alert,” watchful, or on guard (hyper-

**Table 3**  
**Prevalence of personally experienced lifetime traumatic events**

Event	Total (n=117)
Natural disaster	17.1%
Fire or explosion	19.7%
Transportation accident	69.2%
Serious accident at work, home, or during recreational activity	34.2%
Exposure to toxic substance	5.1%
Physical assault	79.5%
Assault with a weapon	77.8%
Sexual assault	12.8%
Other unwanted or uncomfortable sexual experience	16.2%
Combat or exposure to a war-zone	14.5%
Captivity	15.4%
Life-threatening illness or injury	23.9%
Sever human suffering	13.7%
A sudden, violent death	18.8%
Sudden, unexpected death of someone close to you	71.8%
Serious injury, harm or death you caused to someone else	32.5%
Any other very stressful event or experience	51.3%

arousal); 47% reported repeated, disturbing memories, thoughts, or images of a stressful experience from the past (intrusive recollection); and 43% reported feeling very upset when something reminded them of a stressful experience from the past (affective reactivity).

The LEC is a measure of exposure to potentially traumatic events. Almost all (97%) of the participants reported having personally experienced at least one traumatic life event. According to LEC scoring guidelines, scores can range from 0 to 17. Respondents who indicated that an event happened to them personally received a score of 1; all other responses received a score of 0 (i.e., if the respondent only witnessed an event or learned about an event). The total score is derived by summing the item scores (Gray, Litz, Hsu, and Lombardo, 2004). The total score for respondents in the sample ranged from 0 to 17, with an average score of 5.89 (SD = 2.88). A large percentage of detainees reported that they personally experienced a number of potentially traumatic events (*Table 3*).

### Prevalence of mental health problems

The BJMHS measures whether a jail detainee should be referred for a mental health evaluation. Using the BJMHS scoring criteria, 62% of participants were in need of further mental health evaluation. According to BJMHS results, 29% of respondents reported that they believed someone could control their mind by putting thoughts into their head (thought insertion) or taking thoughts out of their head (thought broadcasting); 22% of respondents reported previous hospitalizations for emotional problems; and 9% of respondents were presently taking medications for a psychiatric disorder.

### Probable PTSD and traumatic exposure

A logistic regression analysis examined whether participant characteristics (age, race, marital status, and education) and LEC scores predicted the symptoms of probable PTSD. A total of 107 cases were analyzed. The full model was significant and able to identify with 78.5% accuracy the detainees with probable PTSD (omnibus chi-square = 17.82,  $df = 5$ ,  $p < .003$ ). For every one-point increase in the number of trauma events experienced (LEC scores), the odds of being symptomatic for probable PTSD increased by a factor of 1.25 (95% CI 1.04–1.49). The logistic regression also indicated that race predicted the likelihood of being symptomatic for probable PTSD. Specifically, African American participants were 80% less likely to be symptomatic for probable PTSD than non-African-American characteristics was a significant predictor of the symptoms of probable PTSD ( $ps < .05$ ) (Table 4, column A).

A linear regression analysis explored whether demographic characteristics and LEC scores predicted probable PTSD severity scores as measured by the PCL-C. A total of 107 cases were analyzed. The full model significantly predicted PTSD severity scores:  $R^2 = .22$ ,  $F(5, 106) = 5.711$ ,  $p < .001$ . For every one point increase the number of trauma events experienced (LEC scores), probable PTSD severity scores increased by a factor of 2.17 (95% CI 1.26–3.08). None of the demographic characteristics was a significant predictor of the symptom severity of probable PTSD ( $ps < .05$ ) (Table 4, column B).

### Probable PTSD and mental health

A logistic regression analysis examined whether participant characteristics and PCL-C scores predicted the need for further mental health evaluation as measured by the BJMHS. A total of 108 cases were analyzed. The full model significantly predicted PCL-C scores (omnibus chi-square = 22.49,  $df = 5$ ,  $p < .001$ ) and, overall, the predictions were 73.1% accurate. PCL-C scores predicted the BJMHS results.

Every one point increase in the PCL-C score was associated with an increase in the odds of needing a further mental health evaluation by a factor of 1.08 (95% CI 1.04–1.12) (Table 4, column C).

A logistic regression analysis examined whether participant characteristics and symptom severity for probable PTSD predicted the need for further mental health evaluation as measured by the BJMHS. A total of 108 cases were analyzed. The full model significantly predicted those in need of further mental health evaluation (omnibus chi-square = 15.99,  $df = 5$ ,  $p = 0.007$ ); overall, the predictions were 64.8% accurate. Detainees symptomatic for probable PTSD were 6.93 times more likely to need further mental health evaluation than those who were non-symptomatic (95% CI 1.84–26.11). None of the demographic characteristics were significant predictors of BJMHS scores ( $ps < .05$ ) (Table 4, column D).

### Probable PTSD and drug use

A logistic regression analysis examined whether participant characteristics and self-reported drug use severity predicted symptoms of probable PTSD. A total of 107 cases were analyzed. The full model significantly predicted probable PTSD (omnibus chi-square = 12.32,  $df = 5$ ,  $p = 0.031$ ); overall, the predictions were 77.6% accurate. The logistic regression indicated that race predicted the likelihood of being symptomatic for probable PTSD. Specifically, African American participants were 77% less likely to be symptomatic for probable PTSD than non-African American participants (95% CI 0.08–0.65). None of the other demographic characteristics was a significant predictor of the symptoms of probable PTSD ( $ps < .05$ ) (Table 4, column E).

**Table 4**  
**Regression results**

	A (PTSD symptoms & traumatic exposure)	B (PTSD severity score & traumatic exposure)	C (PTSD severity score & mental health)	D (PTSD symptoms & mental health)	E (PTSD symptoms & drug use)	F (PTSD severity score & drug use)
<b>Constant</b>	.255 (.092)	37.747 (5.707)	--1.292 (1.252)	.922 (.950)	1.116 (1.020)	1.772 (.738)
<b>Age</b>	--.033 (.026)	--.203 (.132)	--.035 (.023)	--.039 (.023)	--.040 (.025)	.024 (.014)
<b>Race</b>	--1.63** (.554)	--4.747 (3.015)	--.031 (.558)	.241 (.563)	--1.474** (.533)	.083 (.330)
<b>Marital status</b>	--.359 (.695)	2.577 (3.425)	.525 (.622)	.656 (.600)	--.423 (.666)	--.009 (.379)
<b>Education</b>	--.615 (.521)	--3.034 (2.709)	.498 (.482)	.451 (.471)	--.551 (.505)	.104 (.295)
<b>LEC score</b>	.221* (.092)	2.173*** (.460)				
<b>PTSD severity score</b>			.073*** (.020)			.013 (.010)
<b>PTSD symptomatic</b>				1.936** (.677)		
<b>Drug severity</b>					.176 (.175)	
<b>Chi-squared</b>	17.828		22.494	15.992	12.318	
<b>R-squared</b>		.220				.042
<b>Adjusted R-squared</b>		.182				--.005
<b>No. observations</b>	107	107	108	108	107	107

\* p < .05.  
\*\* p < .01.  
\*\*\* p < .001.

A linear regression analysis explored whether demographic characteristics and self-reported drug use severity predicted probable PTSD severity scores as measured by the PCL-C. A total of 107 cases were analyzed. The full model was not predictive of probable PTSD severity scores:  $R^2=.04$ ,  $F(5, 106) = 0.89$ ,  $p=.493$ . None of the demographic characteristics and self-reported drug use severity levels was a significant predictor of PTSD severity scores (Table 4, column F).

In summary, the regression analyses showed that the number of traumatic events experienced increased the likelihood of being symptomatic for probable PTSD, which was less likely among African American participants than among non-African American participants. Similarly, the number of traumatic events experienced also predicted probable PTSD severity scores. In addition, both the number of traumatic events and

the symptoms for probable PTSD predicted the need for further mental health evaluations. Self-reported drug use severity predicted the symptoms but not the severity of probable PTSD. In the drug use model for predicting symptoms of probable PTSD, African Americans were again found to be less likely to be symptomatic for probable PTSD than were non-African Americans.

#### Case studies

##### Chronic trauma exposure

Five themes emerged from the case study interviews: chronic trauma exposure, familial and community violence, physical violence, substance use, and the lack of treatment or coping skills. The qualitative interviews indicated that detainees often experienced trauma at



very young ages. In fact, by age five, half of the case study participants had already directly experienced a traumatic event. Among the six interviewees, the oldest age at which an interviewee reported directly participants (95% CI 0.07–0.58).

None of the other demographic experiencing a traumatic event was 14 years old. Nearly all interviewees were reared in communities where violence and exposure to vicarious trauma was commonplace. One interviewee related, “I actually saw killings, people getting shot, laying in puddles of blood, at a very young age. Like when I was about 10 or 11 years old, I was seeing this by me coming up in the projects...” Those interviewees who had experienced trauma by age five or younger reported more traumatic events than those who experienced trauma after age five. The following case study highlights the chronic nature of trauma.

Robert (pseudonym) is a 22-year-old African American man. At age 4, Robert’s home was burglarized, and the intruders hung his niece out of a window as he stood nearby. At age 5, Robert viewed his first dead body (of which he has seen 3 to date). At age 6, he witnessed a woman stab his mother in the head with a butcher knife. At age 7, he observed his cousin being shot in the head and killed. Circa age 7, Robert witnessed a woman killed in a gruesome accident. When he was 8 years old, he witnessed his older sister stab her husband 10 times and watched his home being burglarized. Also at age 8, he was a victim of a sex offense. At age 9, he witnessed a man being severely beaten with a baseball bat and his mother being physically battered by her boyfriend. During that time, he was also a passenger in a serious car accident in which his mother’s vehicle crashed into a building. At age 17, Robert was robbed at gunpoint for the first time, and has been robbed at gunpoint three times since. At 18 years old, Robert was periodically homeless, his girlfriend had a miscarriage, and he was shot in the back. He estimated that he has been shot at approximately 30 times throughout his life. At 21 years old, Robert watched his friend get shot in the head; that same year, his youngest daughter was born with an enlarged heart.

### **Familial and community violence**

The case histories demonstrated that community and familial violence also was pervasive. Five of the six interviewees resided as children in neighborhoods

where crime, violence, drugs and gunfire were ubiquitous. One interviewee related the following story: “I seen (sic)—there’s always—somebody was shooting at—another car was chasing another car, shooting at them in the Woodlawn community. I was young. And he tried—he was trying to get away from—and a man was going like—probably like 70, 80 miles an hour. And he had hit this old lady that was sitting in the park. She always sit in the park, read her book in Washington Park. And he had hit her and knocked half of her face off...her eyeball and stuff was hanging out.”

Family violence was also reported by the majority of interviewees. Five of those interviewed had seen their mothers physically abused during their childhoods. Five of the interviewees also experienced the unexpected and violent loss of a loved one. One man related the following story about the murder of his uncle: “He was—he used to take care of us when my father couldn’t. He used to be there for us and come in there, come to his house, stay at his house. He used to teach us things, how to be respectful to other people, you know, to guide us in the right direction, ‘cause my father couldn’t really do it, because he didn’t know how. Saw him get killed. I saw him actually get killed. He got shot...some gangbangers shot my uncle.”

### **Physical violence**

Although trauma histories varied, direct and vicarious physical violence was universal among those interviewed. All had been physically assaulted or shot at, and had seen dead bodies; most had been robbed at gunpoint and stabbed and had witnessed a murder and serious injury. One interviewee recalled the following: “One time was on Halloween. I think I was like 16 or 17. I was chased in an alley and I think a few of the rival gangs had me in a corner, just had the gun against me and—they spared my life. And that’s why I became so black, angry, I guess.” All six participants reported that they had believed that they would be killed or seriously injured on at least one occasion.

### **Substance use**

Interviewees reacted differentially to their traumatic experiences. Two-thirds reported nightmares and decreased intimacy with or trust in others. Half suffered physical and emotional reactions to stressful events,

including anxiety, cold sweats, and difficulty concentrating. Two reported impaired relationships with family or friends. The use of alcohol or drugs to palliate symptoms was typical. All of the case study participants indicated that they had used alcohol or drugs as a way to cope with distressing experiences.

### **Lack of treatment or coping skills**

None of the interviewees reported having ever received professional services for PTSD and rarely mentioned the exercise of positive coping skills. In fact, only one detainee reported having ever talked openly about his trauma history. He shared his experiences during the group sessions in the IMPACT program and found those discussions cathartic. “It helped me a lot ‘cause it’s like—it’s like I’m releasing a lot of stuff, like cleaning out my garbage can, you know. Just dump it out, garbage out. Get it out. It feels good to just get it out...”

### **Discussion**

Studies have shown that the prevalence of PTSD in the criminal justice population is higher than in the general population, and a link between traumatic events and later criminal activity has been established (Scott, 2010; Widom and Maxfield, 2001). Few investigations, however, have been conducted on the prevalence and severity of PTSD among men in jail, particularly non-veteran male detainees. Accordingly, the goal of this study was to examine the nature and extent of probable PTSD among men participating in a TC/drug treatment program in a large urban jail. In order to explore the prevalence of this condition and to understand more thoroughly both the causes and effects of detainees’ trauma, a standardized tool to assess PTSD was administered and a sample of detainees who had high levels of trauma severity were interviewed.

#### *Prevalence of PTSD and comorbidity*

Approximately one-fourth of the participants in the sample screened positive for a probable past-year diagnosis of PTSD, a rate five times greater than that in the general population (Kessler, Chiu, Demler, Merikangas, and Walters, 2005). Nearly half of the detainees reported symptoms of hyper-arousal and intrusive thoughts, and more than 40% reported symptoms of emotional distress stemming from reminders of traumatic episodes. Moreover, nearly all of the detain-

ees reported several traumatic life events, any one of which could have precipitated symptoms of PTSD.

In fact, the proportion of men who had experienced adverse life events directly or vicariously was extraordinarily high compared with the proportion of men in the general population who report occurrences of such events (Kessler, Chiu, et al., 2005). As a rough comparison, nearly 80% of the men in the current study reported a lifetime prevalence of physical assault compared with 11% of the men in the national comorbidity survey (Kessler et al., 1995). In short, the cumulative index ratio for PTSD in the CCDOC population (lifetime risk) would be expected to be quite high, especially among men in drug and psychiatric treatment programs (Gabbay, Oatis, Silva, and Hirsch, 2004; Swartz et al., 2005).

Despite the use of a categorically based decision-making process to render a putative diagnosis of PTSD, its clinical manifestations typically lie on a continuum of impairment and severity. Therefore, many of the detainees who were subsyndromal for a probable diagnosis of PTSD might still be suffering from the adverse consequences of their exposure to traumatic events and experiences and could become symptomatic following environmental triggers. Jail-based treatment programs can be appropriate settings for teaching detainees the skills and competencies needed to weather the vicissitudes of living in poor communities rife with crime, violence, and social disorder.

PTSD is frequently comorbid with other psychiatric disorders, especially major depressive disorder (Brady, Killeen, Brewerton, and Lucerini, 2000). People with PTSD are often also comorbid for other diagnoses such as bipolar disorder, substance use disorders, and a variety of anxiety disorders as well as psychotic symptoms and suicidality (APA, 2000; Amir, Kaplan, Efroni, and Kotler, 1999; Ben-Yaacov and Amir, 2004; Kubiak and Rose, 2007). For example, veterans diagnosed with PTSD report symptoms of depression, anxiety, and substance use disorders (Kulka et al., 1990). In the general population, approximately 80% of women and 88% of men with PTSD meet the criteria for the diagnosis of another mental disorder at some point in their lives (Kessler et al., 1995).

People with PTSD are at a 4 to 5 times greater risk of abusing substances than those with no PTSD (National

Center on Addiction and Substance Abuse at Columbia University, 2001). Substance use can exacerbate PTSD symptoms, increase an individual's risk for impulsive or criminal behavior (Kubiak and Rose, 2007; McGuire and Clark, 2011), and place people at risk for further trauma (Chilcoat and Breslau, 1998; Kubiak and Rose, 2007; Mills, Teesson, Ross, and Peters, 2006). Moreover, people with substance use disorders and co-occurring PTSD have poorer treatment outcomes than those without PTSD (Ouimette, Finney, and Moos, 1999), suggesting that treatment providers must be mindful of the effects of trauma on recovery for these populations. We found no relationship between self-reported, retrospective drug use severity and probable PTSD in this study due to the shortcomings of the measure of drug problems and the fact that all participants were currently in treatment and sober. A clinical assessment conducted outside of a treatment facility would have likely yielded a different result.

A large percentage of the study's participants were likely to be comorbid for mental health problems, which is consistent with previous research on PTSD and comorbidity (Kessler et al., 1995). The BJMHS indicated that psychiatric problems might be quite serious; nearly one quarter of the sample reported previous psychiatric hospitalization, and nearly 10% reported current treatment with psychiatric medication. These results as well as those of numerous other studies indicate that the rates of serious mental illness reported in jail samples are higher than those reported in samples of the general population (James and Glaze, 2006; Teplin, 1990). For example, the most rigorous studies of the prevalence of mental illness in jails were conducted in the CCDOC and found that current prevalence rates of severe mental disorders were 6% for male and 12% for female detainees (Abram, Teplin, and McClelland, 2003; Teplin, Abram, and McClelland, 1996).

A previous study of comorbidity in the CCDOC's Day Reporting Center—a site for drug treatment services for detainees awaiting adjudication—found that more than half of the sample had one or more lifetime psychiatric diagnoses (Swartz and Lurigio, 1999). In that investigation, the great majority of detainees with a serious mental illness or antisocial personality disorder were comorbid for a substance abuse or dependence disorder. These results further suggested that serious mental illness was even more prevalent among detain-

ees in drug treatment than in the general population of jail detainees. Most importantly, the study also found that detainees with serious comorbid substance use and psychiatric disorders were often afflicted with PTSD. Hence, severe mental disorders, comorbid with substance use disorders, are common in the jail population and require specialized interventions (Abram and Teplin, 1991; Abram et al., 2003; Teplin, 1994).

The high rate of comorbidity between psychiatric disorders, particularly the co-occurrence of addiction and mental illness, is attributable to several factors. These include the notion that a common underlying vulnerability causes such disorders and that people with psychiatric problems self-medicate with alcohol and drugs. Indeed, studies have demonstrated that many of the symptoms of PTSD, such as re-experiencing the traumatic event in recurring memories, avoidance/numbing, and increased arousal, can lead to self-medication with drugs and alcohol (Kubiak and Rose, 2007). The bidirectional causality between drug use and psychiatric disorders is also a mechanism that can foster comorbidity; that is, substance use can trigger psychiatric symptoms among those with a predisposition, and those with a psychiatric disorder are more prone to substance abuse and dependence disorders (Lurigio, 2009; Swartz and Lurigio, 2006). Finally, the high rate of comorbidity in the current sample might be explained by the fact that the co-occurrence of diseases is more common in treatment than in non-treatment settings because a patient with more than one disease is likely to seek treatment for any one of them (Berkson, 1946).

CCDOC detainees live mostly in Chicago's poorest neighborhoods, where crime, violence, public drug sales, and gang activity are rampant. More than half return to custody within three years, especially those who live in the most crime-ridden neighborhoods (Olson, 2011). For 2012, the numbers of homicides and shootings in the city have exceeded 500 and 2700, respectively (Swartz, 2012). Extremely violent environments induce trauma. Among susceptible individuals, repeated exposure to violence in criminogenic and pathogenic environments leads to high rates of co-occurring substance use and psychiatric disorders, including PTSD and other types of psychological instability that often promote further violence (Crimmins, Cleary, Brownstein, Spunt, and Warley, 2000). The most violent communities are concentrated in areas of

poverty with the highest proportions of African American residents in the city and county (Lurigio, 2012). However, the current findings on race are inconsistent with previous studies of the adverse environmental precipitants of PTSD and the attendant higher rates of the disorder among African Americans.

Several hypotheses might help explain this unexpected result. African American men could have become inured to repeated exposure to violence, which is normative in the subculture of violence and gang membership in the parts of Chicago and Cook County where most jail detainees reside (Lurigio, 2012). The continued experience of violence could have had a habituating effect on African American men, thereby making them less susceptible to its traumatic effects. These men also could have adapted to the violence by directing its effects outward and becoming violent themselves instead of directing its effects inward and becoming symptomatic with anxiety and depression (Bell and McBride, 2010; Van Voorhees, Paunesku, Fogel, and Bell, 2009). In addition, the stigma attached to mental illness in the African American community could have prevented the African American participants from answering the mental health questions honestly and openly (Snowden, 2001).

### *Study limitations*

The study's methodology was limited with respect to sample size, selection, and composition. The sample consisted of the single-day census of men in a drug treatment program in an urban jail. Therefore, the findings neither generalize to the jail detainees in Chicago or elsewhere nor provide information about women or men in CCDOC's or other jails' general populations, especially those in non-urban settings. Nonetheless, the results are highly suggestive of the presence of probable PTSD among detainees with substance use problems, which constitute a sizeable proportion of CCDOC detainees as well as those in other large jail settings (Office of National Drug Control Policy, 2012). Moreover, trauma-informed drug treatment is critical to the success of such programming given the powerful connection between trauma and addiction (Lurigio, 2012). The urban location is also a drawback of the research; however, trauma is more likely to be found in urban settings where violent crime is highest and intergenerational poverty and environmental stressors are most likely to occur. Jail populations

reflect the characteristics of people living in the most impoverished areas of the surrounding community. Thus, the current research illuminated a problem in a setting where it looms large and burns intensely.

Another related limitation is that the data were collected during only one day in the CCDOC, which could potentially and sorely restrict the generalizability of the findings. The jail population constantly fluctuates and therefore the IMPACT program's clients might vary temporally as well. Nonetheless, in the jail and in the program, the variability is mostly in terms of the size and not the characteristics of the population. The demographic characteristics of the study's sample were no different from those reported in IMPACT's monthly and annual statistics, which parallel the jail population's characteristics except for gender. Other than random fluctuations in the composition of the program's census on that particular day, no systematic differences suggest that the sample was more or less affected by trauma than a sample that would be selected on any other day or days. A comparable number of detainees were off the tier at the time and day of the study and for the same reasons as would be observed on any other day in Division VI.

The data were collected on a single day of programming for compelling logistical and practical considerations. IMPACT services are highly structured, tightly packed, and curricula-bound. In order to minimize disruption to services and in consultation with WestCare administrators, the survey was administered in one day, which was prearranged with WestCare's program's supervisor and counselors. Repeated survey implementation would have intruded seriously with the content and flow of the curricula and vitiated the integrity of programming. The study was intended to yield a snapshot of PTSD among detainees and provide the basis for future research on the prevalence of PTSD, using screening and assessment tools at intake for all CCDOC detainees. In short, the disruption to programming, which is on a stringent schedule, and the expenditure of meager investigative resources, would not be worth the questionable payoff of extending data collection across several days.

The current study relied heavily on self-reports, which are inherently limited but de rigueur in social science research. As such, the tools employed in this study were designed for self-administration and have been

implemented in numerous studies of PTSD. In addition, our data collection approaches relied on retrospective reports of trauma, which can be colored by the many vagaries of memory; however, traumatic incidents, by their very nature, can create emotionally infused, ruminative thoughts as well as recurring and intrusive vivid memories—which are defining symptoms of PTSD—and are likely to become seared in recollection and an essential component of self-identity (Berntsen and Rubin, 2007). Finally, the current results are also limited by the absence of a defined cut-off score for applying the PCL-C within a detainee population; hence, we could have under- or over-reported the prevalence of probable PTSD among men in jail-based drug treatment programs.

## Conclusions

The current study suggests that the presence of PTSD among male detainees must be incorporated into the development of jail-based behavioral healthcare services. The first step is proper screening and evaluation for all detainees in psychiatric and substance abuse programs. As the present study has shown, such screenings can be done effectively and efficiently. Those detainees with elevated levels of trauma can then be referred for more in-depth evaluations administering the Clinician Administered PTSD Scale (CAPS), which is the gold standard for PTSD assessment and can be administered by a trained mental health professional using a detailed instruction manual (Blake et al., 2000). Careful evaluation should be followed by interventions that are integrated with existing psychiatric and substance abuse treatment regimens (Gulliver and Steffen, 2010).

Given the elevated rates of traumatic exposure and probable PTSD, in-custody drug treatment programs should adopt trauma-informed strategies for all program participants as the expected standard of care. In addition, a number of evidence-based treatments can be used singularly or in combination with other therapies to relieve the symptoms of PTSD and to help detainees begin the healing process. Effective techniques include cognitive-behavioral strategies (e.g., cognitive restructuring), exposure therapy (e.g., detailed imaging of the trauma in a controlled environment), eye movement desensitization and reprocessing (e.g., recall of trauma with shifting bilateral attention), and medications (e.g., anti-depressants) (Hamblen, 2012).

The tenets of trauma-informed care transcend treatment modalities and settings and include encouraging detainees to recognize and express trauma in a safe and supportive atmosphere; building on the often-unrecognized strengths and resiliencies of detainees, which take advantage of the brain's natural plasticity (Southwick and Charney, 2012); and providing detainees with the tools they need to manage their trauma symptoms successfully after they leave jail and reenter the community (Harris and Fallot, 2001). For example, meditation or mindfulness exercises can be adapted for in-custody TCs and have shown some promise in relieving the symptoms of PTSD and reducing the craving for alcohol and illicit substances (Shapiro, Carlson, Astin, and Freedman, 2006; Witkiewitz, Marlatt, and Walker, 2005).

Jail-based drug treatment programs can assist clients in managing their trauma in healthier ways. The likelihood of developing chronic PTSD can be reduced with early treatment and intervention following the event, which helps sufferers process their trauma and alleviate its attendant symptomology (Litz and Maguen, 2007). Likewise, if trauma-informed care becomes customary in jails, the PTSD-triggering effects of such environments can be ameliorated.

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