

Trauma Exposure and Mental Health Characteristics of Incarcerated Females Self-Referred to Specialty PTSD Treatment

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Objectives: This study examined the traumatic and stressful event exposure history and psychiatric health characteristics of soon-to-be released female inmates who self-referred to specialty post-traumatic stress disorder (PTSD) treatment. **Methods:** The final sample (N=209) included female prison inmates aged 18 or older who were assessed for trauma exposure and axis I disorders with standardized clinical instruments. **Results:** The rate of serious mental disorders was high. Presence of psychiatric disorders was significantly associated with a history of traumatic event exposure and full or subthreshold PTSD, and high rates of overall traumatic event exposure (88%) and childhood sexual or physical trauma (74%). Descriptive profiles of specific lifetime traumatic and stressful events were associated with psychiatric disorders. **Conclusions:** Findings suggest

strong behavioral effects associated with lifetime traumatic and stressful event histories and indicate major psychiatric health care needs among female prison inmates that are likely unmet by existing services. (*Psychiatric Services* 62:954–958, 2011)

Empirical data indicate that people with serious mental illnesses are far more likely to experience traumatic event exposure in their lifetime than those in the general population. Estimates from epidemiological studies indicate that, over a lifetime, traumatic events are experienced by between 36% and 81% of the general population (1). Comparable rates for people with serious mental illnesses range from 51% to 98%, and the severity and frequency of these traumatic stressors tend to be greater than what the general population experiences (2). A similar pattern is found for criminal victimization. Teplin and colleagues (3) found that, during a 12-month period, over one-quarter of persons with serious mental illnesses were victims of a violent crime, a rate that was 11 times higher than that of the general population.

Other research has focused on rates of lifetime and current traumatic event exposure among persons with mental illnesses residing in correctional settings. Not surprisingly, trauma exposure is highly prevalent among people with mental illnesses in

correctional settings (4). Compared with inmates without a mental disorder, those with mental illness were 1.6 or 1.7 times more likely to be physically victimized (male or female inmates, respectively) (5). Similarly, prevalence rates of sexual victimization among inmates were found to be significantly higher for inmates with a mental disorder than for those without a mental disorder independent of gender, and these rates were higher than those reported for community-based samples (6).

Lifetime and current rates of physical and sexual assault are likely to be elevated in correctional settings in part because prison environments are violent settings that exploit vulnerable groups (4), and they disproportionately represent people from socially and economically distressed locations, where rates of violence are typically higher (3). Incarcerated women report high rates of physical, sexual, or emotional abuse during their formative years and often in adulthood (7,8), as well as mental health (9,10) and addiction problems (11). Yet only a small minority of them receive appropriate treatment for behavioral health problems associated with posttraumatic reactions while incarcerated (12,13), even though these problems are risk factors for recidivism.

Even though previous studies have documented high prevalence of trauma experiences, very little is known

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about the details and context of traumatic event exposure history of incarcerated persons and what, if any, associated behavioral health problems these individuals also experience. This information is critically important to the development of integrated treatment interventions designed to address the behavioral health needs of incarcerated persons with mental disorders. Failure to identify and treat trauma-related psychiatric symptoms may result in a range of problematic behaviors, such as substance abuse, interpersonal violence, and gambling, which may lead people back to prison.

The study reported here describes the traumatic event exposure history and behavioral health problems of a sample of incarcerated women who referred themselves to specialty post-traumatic stress disorder (PTSD) treatment. We previously profiled the rates of PTSD and subthreshold PTSD, as well as the associated traumatic events and comorbid psychiatric disorders, among this population (8). Our goal was to describe the trauma and stress exposure histories of incarcerated women by type of mental disorders (beyond PTSD) in an effort to inform the development of an integrated treatment response to the co-occurrence of trauma, mental disorder, and addiction problems among incarcerated women.

Methods

As part of a parent study to examine a new adapted trauma reentry program in prison, we conducted structured diagnostic clinical interviews and an interview to evaluate lifetime history of traumatic and stressful event exposure with soon-to-be-released female inmates. The purpose of the study reported here was to provide descriptive data on traumatic event exposure history and behavioral health characteristics for this underserved and understudied population.

The study population was English speaking, soon-to-be-released incarcerated women, age 18 years or older, with trauma histories who resided at an adult women's correctional facility (population approximately 850) located in a northeastern state. "Soon-to-be-released" was defined as expected

to be released from prison within eight to 36 months from August 1, 2009, and to have at least 30 weeks left to serve at the adult prison. The median term of commitment was five years, with the last 24 months spent in community-based settings for inmates achieving minimum-security status. The study was announced in monthly inmate newsletters and at presentations given in housing units by the investigators. Interested inmates could self-refer for clinical assessment in their housing units, during the orientation presentation, or by sending a note to the study mailbox at the prison.

Of the 418 women who self-referred for screening (roughly half the prison population), 320 satisfied the release date condition (eight to 36 months to release date or to parole eligibility date) to be screened. Overall, ten (3%) of the 320 time-eligible inmates were not screened. Reasons for not being screened varied; four were in administrative segregation, three were in the mental health unit, two signed up after the recruitment interviews were completed, and one was on medical leave. A total of 310 inmates met with a screener. Of those, 97 (31%) either declined to be screened or were determined ineligible at prescreening because they did not have enough time to complete the study, had work conflicts, did not speak English, were unable to participate in the program because of medical limitations, or reported no trauma history. An additional four women were partially screened but did not complete the process because of language barriers or were unexpectedly released to a halfway house. A total of 209 women (mean±SD age 34±9) age 18 or older participated in the full screening: 105 (50%) were African American, 65 (31%) non-Hispanic white, 33 (16%) Hispanic, and six (3%) another race or ethnicity.

Written informed consent was required before study participation. The appropriate university institutional review board and the agency research review committee approved the protocol, recruitment, and consent procedures, as well as the consent form.

Clinical interviews were adminis-

tered by master's-level, clinically trained social workers or psychologists and were conducted in private rooms. The assessors were trained and supervised by doctorate-level researchers with experience administering these instruments in clinical and research settings related to PTSD and serious mental illnesses (14). Assessments took approximately two hours to administer. Data were collected from July 2009 through April 2010.

The clinical interview included the following instruments: the Clinician-Administered PTSD Scale (CAPS), to diagnosis lifetime and current full or subthreshold PTSD; the Structured Clinical Interview for DSM-IV Non-patient Version (SCID-NP), to assess other axis I disorders, including alcohol and substance abuse or dependence disorder; and the Trauma History Questionnaire and the Life Stressor Checklist-Revised (LSC-R), to assess trauma history. All clinical measures are commonly used with traumatized populations and were scored in standard fashion.

Diagnostically, full PTSD was defined as having a qualifying traumatic event, one reexperiencing symptom, three avoidance symptoms, and two arousal symptoms with the presence of co-occurring significant distress and impairment. Subthreshold PTSD classification required a qualifying traumatic event, one reexperiencing symptom, and either three avoidance or two arousal symptoms with the presence of co-occurring significant distress and impairment (15).

Respondents were classified into groups according to mental disorder status (serious mental disorder, other axis I disorder, or no axis I disorder) for both descriptive and comparative purposes. Serious mental illness includes psychotic disorders, bipolar disorder, and major depressive disorder. Other axis I disorder includes anxiety disorder, dysthymic disorder, depressive disorder, and other mood disorder. The significance levels used to assess the validity of the null hypotheses were $p < .05$ and $p < .01$. Means and percentages were estimated on the basis of valid numbers. SAS 9.2 was used for the analysis, and Proc means and freq were used to con-

struct all statistics. Given the small sample size and the exploratory nature of the study, Bonferroni-type alpha adjustments were not conducted, which raised the possibility of type I error but minimized type II error.

Results

On average, the 209 incarcerated women who self-referred to trauma treatment were 34 years old and serving time for a violent crime, and a large majority had an axis I psychiatric disorder (178 of 209, 85%), symptoms that met the criteria for full or subthreshold PTSD (N=184, 88%), and substance abuse or dependence problems (N=181, 87%). Women with an axis I disorder were

significantly and substantially more likely to have full PTSD than their counterparts without an axis I disorder (83% versus 42%). [Tables providing further details are provided in an online supplement to this brief report at ps.psychiatryonline.org.]

Traumatic event exposure was highly prevalent (Table 1). More than 50% of the incarcerated women reported experiencing at least one event of physical or sexual abuse perpetrated by someone they knew; the abuse was life or physically threatening and resulted in severe to extreme distress. Nearly three-quarters or more of the women reported childhood trauma (physical or sexual) and adult physical trauma. Rates of child-

hood and adult interpersonal trauma were highest among incarcerated women with a serious mental disorder (81% and 89%, respectively). Women with a serious mental disorder were most likely to report experiences of sexual abuse.

Obtained data also profiled the lifetime traumatic and stressful event histories of these incarcerated women (Table 1). Majorities of the sample reported experiencing at least one type of crime-related (58%), general disaster-related (99%), or interpersonal (87%) trauma. These types of trauma were least likely to be reported by women with no axis I disorder. Of the women with a serious mental disorder, over 60% reported

Table 1

Trauma characteristics by type of axis I mental disorder category among soon-to-be-released female inmates

Characteristic	Total sample		Serious mental disorder ^a			Axis I disorder			No axis I disorder	
	N	%	N	%	p ^c	N	%	p ^c	N	%
Age of onset (M±SD)	184 ^b	17±9	131	16±9		35	18±9		18	19±8
Event type										
Physical	184	66	131	68	<.0001	35	71	.015	18	52
Sexual	184	52	131	61		35	47		18	19
Both physical and sexual	184	31	131	36		35	26		18	13
Frequency of trauma										
Physical, multiple	184	33	131	34	.033	35	37		18	26
Sexual, multiple	184	20	131	24		35	18		18	7
Level of harm										
Life threatening	184	65	131	66	.027	35	74	.016	18	45
Serious injury	184	71	131	77	.004	35	66		18	52
Threat to physical integrity	184	70	131	76	<.0001	35	79	<.0001	18	29
Childhood trauma or violence	209	74	140	81	<.0004	38	63		31	52
Physical	209	48	140	51	<.0004	38	42		31	45
Sexual	209	55	140	64		38	45		31	29
Adulthood trauma or violence	209	85	140	89	.0035	38	87		31	68
Physical	209	77	140	78		38	82		31	65
Sexual	209	35	140	36		38	37		31	23
Trauma history										
Crime-related events	209	58	140	59	<.0001	38	63		31	45
General disaster	209	99	140	99		38	100		31	94
Physical and sexual	209	87	140	93		38	82		31	68
Life Stressor Checklist score (M±SD) ^c	209	14±4	140	15±4	<.0001	38	13±5	.0302	31	11±4
Perpetrator relationship ^d										
No perpetrator	209	6	140	4	.0185	38	5	.022	31	16
Partner	209	51	140	54	.0066	38	50		31	39
Relative	209	56	140	62		38	47		31	36
Acquaintance	209	42	140	46		38	40		31	29
Stranger	209	42	140	40	<.0001	38	53		31	36
Multiple	209	65	140	71		38	63		31	36

^a Includes anyone with a diagnosis of a psychotic disorder, bipolar disorder, or major depression

^b Only those who had full or subthreshold posttraumatic stress disorder were asked about type of traumatic event, its frequency, level of harm, age at trauma onset, and level of distress.

^c Possible scores range from 0 to 30, with higher scores indicating greater stress.

^d These categories are not mutually exclusive. Participants can be represented in one or more of the categories.

^e For comparison between women with serious mental disorders, other axis I disorders, and no axis I disorders, by t test or chi square test.

that at some point in their lives they feared being killed or injured, saw someone injured or killed, had someone close to them become seriously injured or die, experienced abusive sexual contact, or were forced to have sex against their will. Mean scores on the LSC-R were significantly higher for women with a psychiatric disorder compared with women with no psychiatric disorder. Compared with women without an axis I disorder, women with a serious mental disorder were more likely to report experiencing foster care or adoption, serious money problems, serious physical or mental illness, emotional abuse or neglect, and some form of abuse both before and after age 16. [See online supplement for details.]

Discussion

Data from this large typical sample of treatment-seeking, soon-to-be-released female inmates revealed high rates of serious mental illness (67%), with only a small percentage (15%) of the sample exhibiting no axis I psychiatric disorder; presence of psychiatric disorders, especially those classified as serious mental illnesses, were significantly associated with a history of traumatic event exposure, especially interpersonal violence and full or sub-threshold PTSD; significant and complex histories of traumatic event exposure, including high rates of overall traumatic event exposure (88%) and childhood sexual or physical trauma (74%); and descriptive profiles of specific lifetime traumatic and stressful event experiences associated with serious mental disorder and other psychiatric disorders. Together, these findings suggest strong behavioral effects associated with lifetime traumatic and stressful event histories and clearly indicate major behavioral health care needs among female prison inmates that are likely unmet by currently available services.

The lifetime traumatic event histories of our sample were characterized by multiple, complex, and severe episodes of interpersonal physical and sexual violence in both childhood and adulthood. Most of the sample reported at least one significant lifetime traumatic event, and about two-thirds reported a traumat-

ic event that was perceived as life threatening and that actually caused serious physical injury. Both physical and sexual interpersonal violence were common, and 30% of the sample reported experiencing both at some point in their life. Moreover, traumatic events occurred throughout the life span. Childhood violence was experienced by over 70% of the sample, with a majority (55%) reporting sexual violence. Of the 85% reporting traumatic experiences during adulthood, physical violence was most frequent (77%), and sexual violence (35%) was common. Perpetrators of this violence were spread rather evenly across partners, relatives, acquaintances, and strangers. Over half of the sample (65%) reported experiencing interpersonal violence from more than one perpetrator. Frequency of individual types of traumatic and stressful life experiences was significantly higher in the serious mental disorder group than among participants with no psychiatric disorder.

In addition to all the usual methodological limitations of cross-sectional and self-report research, this study had several additional limitations. First, it included only female inmates who were self-referred for inclusion in an intervention that focused on addressing PTSD, other posttraumatic reactions, and reentry preparation. Participation was limited to women who spoke English and were soon to be released. Thus findings may not generalize to the female prison population as a whole. This concern is mitigated somewhat by the fact that approximately a quarter of the total prison population was fully screened for participation. Most of the potential participants who satisfied the release date condition participated, and even the most conservative interpretation of the data indicate high levels of serious mental disorder, PTSD, and traumatic and stressful event exposure. Second, self-report histories regarding potentially threatening topics (trauma and psychopathology, for example) by vulnerable people (inmates) are subject to a variety of errors and respondent biases beyond mere faulty recall. Third, our structured clinical interviews did not in-

clude reliability checks beyond rigorous training and supervision procedures. Concern about these study limitations is mitigated by the study's strengths, including a large typical sample of female inmates and a group whose behavioral health care needs are vastly understudied. In addition, the use of structured clinical and diagnostic interviews, conducted with careful training and supervision, also represent a strength of this study.

Conclusions

These findings identify prominent behavioral health care needs within a particular section of the female inmate population and are suggestive of the general level of need within the broader female prison population. Female inmates appeared to have extensive lifetime traumatic and stressful event exposure histories and met *DSM-IV* criteria for multiple psychiatric disorders, including serious mental illnesses, PTSD, and past substance use disorders. Identifying trauma exposure, especially interpersonal trauma, within this population and providing effective interventions hold promise for preparing incarcerated women to better manage their lives in ways that will keep them safe, healthy, and in the community after release from prison.

Future controlled research is needed with this population and with male inmates in regard to optimal strategies for screening and treating trauma-related psychopathology. Research needs to address not only how to most effectively treat posttraumatic psychopathology but when and how best to integrate it with other medical and reentry services. In fact, fragmentation of these various services represents a significant barrier to maximizing care for inmates. Commonly used medications (antipsychotics) may be problematic or ineffective, whereas trauma-focused psychotherapy (exposure) may not be appropriate for people who are living in stressful or traumatic environments. This will require careful consideration in the design and implementation of treatment efforts. Ultimately, research is needed to examine optimal ways of

integrating trauma-informed medical and mental health services with community reentry programs.

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The authors report no competing interests.

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