

Differences in Anxiety Between First-Time and Multiple-Time Inmates: A Multicultural Perspective

Vianey Reinhardt, MA and Richard Rogers, PhD

The present study investigated differences in anxiety symptoms and associated features between 129 first-time and multiple-time male inmates from a large urban jail. Participants were assessed on three separate anxiety measures: the Structured Clinical Interview of DSM-III-R Disorders (SCID) anxiety disorders module, the State Trait Anxiety Inventory, and anxiety scales of the Personality Assessment Inventory (PAI). First-time inmates were found to have more symptom severity for Generalized Anxiety Disorder, especially symptoms related to scanning and vigilance. Both first-time and multiple-time inmates evidenced higher state than trait anxiety, although this pattern did not hold for African Americans. Contrary to previous research, few ethnic differences were found in this incarcerated sample.

The prevalence of mental disorders among incarcerated populations varies dramatically by both inclusion criteria and correctional settings. Marked ranges in prevalence are observed both in jail¹⁻³ (15.0% to 62.4%) and prison⁴⁻⁶ (15.0% to 77.5%) facilities. Inclusion criteria for categorizing mental disorders contribute substantially to these extreme variations. Several authors^{2,7} have included the full spectrum of mental disorders (e.g., substance abuse and personality disorders), while others³ have reported only severe

Axis I disorders (e.g., major depression and schizophrenia). These differences in inclusion criteria account for much of the disparity in prevalence rates.

Research in jail populations also has focused on highly problematic behaviors. Because the rate of completed suicides is approximately 900 percent of the prevalence in the general population,⁸ investigators have been particularly concerned at risk factors for completed and attempted suicide.⁹⁻¹¹ Suicide risks in correctional settings appear to be more a function of the types of people incarcerated than the type of place (correctional facility) in which they are incarcerated.⁹ Preexisting mental disorders and dyspho-

Ms. Reinhardt and Dr. Rogers are affiliated with the Department of Psychology, University of North Texas. Address correspondence to: Richard Rogers, PhD, Box 311280, Denton, TX 76203-1280.

ria (anxiety and depression) appear to be risk factors for suicide attempts.¹¹⁻¹³

The paucity of jail mental health services has forced many facilities to adopt a triage model in which interventions are provided only to people with very severe or emergent conditions.¹⁴⁻¹⁶ As a result, anxiety and other "milder" forms of psychopathology are largely neglected. Consequently, the prevalence and impairment of jail inmates by anxiety symptoms and disorders remains relatively unresearched. Existing data suggest that anxiety is prevalent among inmates and may affect their day-to-day functioning and adaptation to correctional environments.^{17, 18}

Slater¹⁹ formulated the specific syndrome of "prison anxiety" to explain the substantial maladjustment of inmates to correctional placements. He defined this syndrome as a combination of tension, irritability, sleeplessness, nightmares, inability to think clearly or concentrate, and fear of impending loss of impulse control. Slater postulated that prison anxiety (1) impairs inmates' sleep, concentration, and work; and (2) predisposes inmates to suicidal behavior, brief psychotic reactions, and psychophysiologic reactions. Slater concluded that prison anxiety was often neglected in psychiatric treatment.

Adaptation to correctional settings is likely to be particularly difficult for first-time inmates and is often compounded by the uncertainties of sentencing. In a prison setting, MacKenzie and Goodstein²⁰ found that inmates who were new to prison and anticipating long sentences reported significantly higher levels of anxiety, fear of other inmates, depression, and psychosomatic illness than those who

had already served long sentences. New inmates had not developed the coping strategies found among their more experienced counterparts and found this unfamiliar and hostile environment to be anxiety provoking.

Assessments of mentally disordered offenders suggest important but inconsistent differences in the presentation of psychopathology on the basis of ethnicity.²¹ With respect to inmates, Silverman and Vega¹⁷ investigated variables associated with prisoner stress across several ethnic groups. Interestingly, they found that Hispanic Americans exhibited higher levels of anxiety on trait dimensions compared with African Americans or Anglo-Americans. In addition, ethnic groups may respond differently to anxiety-provoking conditions while incarcerated. Neal and Turner²² reported that incarcerated African Americans with anxiety diagnoses in their study exhibited more violent behavior, homicidal ideation, homicidal behavior, and suspiciousness than their Anglo-American counterparts.

Several important questions emerge from the existing literature on anxiety among inmates. First, do jail inmates exhibit less anxiety after multiple incarcerations? Second, what ethnic differences are found among inmates with respect to anxiety symptoms? Past research has tended to focus on single measures of anxiety. In the current investigation, we sought to examine three related parameters of anxiety: (1) DSM anxiety symptoms and disorders, as evaluated by the Structured Clinical Interview of DSM-III-R Disorders (SCID);²³ (2) state and trait anxiety as measured by Spielberger's

Anxiety Among Inmates

State-Trait Anxiety Inventory (STAI);²⁴ and cognitive and affective dimensions of anxiety as appraised by the anxiety scales and subscales of the Personality Assessment Inventory (PAI).²⁵

Methods

Participants The sample for this study consisted of 129 men detained in the Tarrant County (Texas) Jail, a maximum security facility that houses in separate units both violent and nonviolent offenders. Based on ethnic identities, the participants were composed of three groups: 46 (35.7%) African Americans, 46 (35.7%) Anglo-Americans, and 37 (28.7%) Hispanic Americans. Participants were divided into two groups consisting of 44 first-time inmates and 85 multiple-time inmates. The study was restricted to adult males (≥ 18 years of age) because of the greater availability and ethnic diversity of male participants.

Measures SCID The SCID is a semistructured clinical interview for assessing symptoms and establishing DSM diagnoses. The majority of validity studies with the SCID have focused on its clinical utility with anxiety and panic disorders (for a review, see Rogers²⁶). For the purposes of this study, the anxiety disorders module of the SCID was administered. This module consists of 111 individual ratings that are based on standardized clinical inquiries. This module covers the following diagnoses: Panic Disorder, Agoraphobia, Social Phobia, Simple Phobia, Obsessive Compulsive Disorder, and Generalized Anxiety Disorder.

STAI Spielberger operationalized the

concept of state and trait anxiety through the development of the STAI. The STAI is composed of two scales, each of 20 self-report items that indicate the presence or absence of specific anxiety symptoms. According to Chaplin,²⁷ the STAI is written to a sixth-grade reading level. Previous research has established its usefulness for investigating anxiety patterns in correctional populations.^{20, 28-30}

Personality Assessment Inventory The PAI is a new-generation multiscale inventory for the assessment of psychopathology and treatment needs. The PAI has been used extensively in correctional settings because of its easy reading comprehension (grade 4), moderate length (344 items) and extensive validation.^{31, 32} In the current investigation, we focused on the two clinical scales that address anxiety symptoms: Anxiety (ANX) and Anxiety-Related Disorders (ARD). In addition, we examined the Antisocial (ANT) scale, which measures dimensions of psychopathy (egocentricity, sensation seeking, and antisocial behavior).

Procedure Participants were invited to take part in a study measuring adjustment to jail. They were notified of its voluntary nature and asked to give written informed consent after reviewing a description of the study. Incarceration status and ethnic identity were established based on participants' self-report. To determine reading levels for each participant, the Wide Range Achievement Test (WRAT-3)³³ reading subtest was administered. Oral administrations of the PAI were provided for participants who did not meet the minimum reading level requirement (i.e., grade 4).

The WRAT-3 reading subtest was administered first. Once reading levels were established, the PAI was administered, followed by the STAI and the SCID anxiety module. The STAI and the SCID anxiety module were given to each participant on an individual basis. All testing sessions were conducted by the same researcher and spanned approximately two hours.

Results

Background Data on First and Multiple-Time Offenders Participants in the First-time and multiple-time offender groups were virtually identical with respect to education (first-time: $M = 11.36$, $SD = 1.76$; multiple-time: $M = 11.56$, $SD = 2.02$; $F [1,123] = .41$, $p = .52$); occupational earnings (first-time: $M = \$17,260.61$, $SD = \$9,080.64$; multiple-time: $M = \$17,320.07$, $SD = \$8,052.04$; $F [1,123] = .94$, $p = .34$); and current length of time in jail (first-time: $M = 4.45$ months, $SD = 8.79$; multiple-time: $M = 4.13$ months, $SD = 6.31$; $F [1,123] = .06$, $p = .82$). As expected, participants in the multiple-time group were older than their first-time counterparts. Multiple-time participants averaged 30.42 years old ($SD = 9.55$), while first-time participants averaged 25.63 years old ($SD = 9.55$; $F [1,123] = 8.53$, $p = .004$). No differences among ethnic groups were observed for age or education. However, Anglo-Americans reported a higher family income ($M = \$22,692.31$, $SD = \$8,156.86$) than either African Americans ($M = \$14,320.78$, $SD = \$7,673.93$) or Hispanic Americans ($M = \$13,820.00$, $SD =$

$\$5,616.01$; $F [2,128] = 7.13$, $p < .01$). Hispanic Americans ($M = 1.88$, $SD = 2.85$; $F [2,128] = 3.53$, $p < .05$) spent significantly fewer months in jail than African Americans ($M = 6.03$, $SD = 10.49$), while Anglo-Americans ($M = 4.36$, $SD = 4.87$) did not differ significantly from either group.

Differences in Anxiety Symptoms Between First-Time and Multiple-Time Offenders First-time and multiple-time groups were compared for the frequency of anxiety symptoms as grouped by diagnoses. As reported in Table 1, the severity of anxiety symptoms was generally low ($M_s < 2.0$) for both groups. Despite the restricted range, first-time offenders evidenced greater symptom severity on Generalized Anxiety Disorder (GAD) symptoms than their multiple-time counterparts ($F [1,127] = 5.01$, $p < .05$). For an additional analysis, the three separate clusters of GAD (i.e., motor tension, autonomic hyperactivity, and vigilance and scanning) were examined for first-time and multiple-time groups. Cluster scores indicated more severe symptoms of vigilance and scanning for first-time than multiple-time offenders (see Table 1).

State and Trait Anxiety Among Inmates Contrary to our expectations, no differences were found between the first-time and multiple-time groups on state anxiety; they also did not differ on trait anxiety ($F [1,127] = 1.12$, $p = .33$). However, both groups demonstrated higher state than trait anxiety: first-time group, $M_{state} = 50.36$; $SD = 8.69$ versus $M_{trait} = 45.40$; $SD = 9.64$; $F [1,87] = 5.49$, $p < .05$; and multiple-time group,

Table 1
Comparison of Anxiety Symptom Severity on SCID Anxiety Disorders by
Incarceration Status

Anxiety Disorders	Incarceration Status				<i>F</i> ^a
	First-time		Multiple-time		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Panic	1.10	.06	1.13	.25	.90
Agoraphobia	1.00	.00	1.01	.04	1.40
Social Phobia	1.05	.15	1.10	.23	1.79
Simple Phobia	1.05	.16	1.12	.28	2.81
Obsessive Compulsive	1.14	.34	1.17	.37	.17
Generalized Anxiety	1.48	.52	1.28	.49	4.88*
Motor tension	1.44	.59	1.28	.54	3.20
Hyperactivity	1.31	.44	1.28	.38	2.27
Vigilance/scanning	1.94	.83	1.64	.74	4.17*

^a *df* = 1, 127; **p* < .05.

$M_{\text{state}} = 47.34$; $SD = 9.89$ versus $M_{\text{trait}} = 42.95$; $SD = 9.64$; $F [1,169] = 8.58$, $p < .01$.

Psychopathy as a Potential Confound

One potential confound in the foregoing analyses of the SCID and the STAI is that multiple-time offenders are more likely than first-time offenders to have extensive criminal histories and warrant the classification of psychopath.³⁴ Therefore, differences in anxiety might be the result of psychopathy rather than frequency of incarceration. To address this matter, ANCOVA were performed on the individual SCID diagnoses and the STAI scales to examine differences between first-time and multiple-time offenders. The PAI Antisocial scale (ANT) served as a covariate; the ANT scale²⁵ is designed to measure egocentricity, sensation seeking, and antisocial behavior, all of which are commonly associated with psychopathy.^{34,35} Results of the ANCOVA confirmed the earlier findings

for SCID symptom severity. All *F* ratios were nonsignificant with the exception of GAD ($F [1.127] = 4.85$, $p < .05$), which indicated significantly greater symptom endorsement for first-time offenders, independent of psychopathic tendencies.

Ethnicity: Differences in Background and Anxiety

Ethnic differences were explored by comparing the SCID, STAI, and select PAI scales. As summarized in Table 2, the most notable differences were found for state anxiety and Social Phobia. With reference to state anxiety, African Americans had significantly lower levels than Anglo-Americans and Hispanic Americans. In addition, Anglo-Americans reported significantly higher levels of Social Phobia symptoms than did African Americans. Groups were comparable on all remaining measures of anxiety (i.e., trait anxiety, Panic Disorder, Agoraphobia, Simple Phobia, Obsessive Compulsive Disorder, and Generalized Anxiety Disorder).

Table 2
Comparison of Ethnic Differences on Measures of Anxiety

Anxiety measures	Ethnic Groups ^a						F
	African American (n = 46)		Anglo-American (n = 46)		Hispanic American (n = 37)		
	M	SD	M	SD	M	SD	
State anxiety	43.00 _a	11.17	50.63 _b	12.76	48.51 _b	11.52	5.03*
Trait anxiety	43.32	9.43	44.04	11.63	46.46	9.93	.99
Panic Disorder	1.16	.33	1.09	.04	1.10	.12	1.32
Agoraphobia	1.00	.04	1.00	.02	1.00	.02	.13
Social Phobia	1.04 _a	.20	1.15 _b	.25	1.07 _{ab}	.18	3.56*
Simple Phobia	1.11	.28	1.11	.29	1.06	.12	.54
Obsessive Compulsive	1.24	.46	1.12	.31	1.11	.26	1.69
Generalized Anxiety	1.33	.55	1.36	.47	1.36	.50	.04

^a Groups with common subscripts are not significantly different at the .05 level using Duncan's multiple range test.

* $p < .05$.

Discussion

Correctional settings are noted for their threatening and potentially violent environments. In particular, jails represent unstable environments because of the continued influx of new inmates whose potential for aggressive behavior is unknown. Vigilance and scanning were particularly prominent among first-time offenders unacclimated to incarceration. Salient aspects of vigilance and scanning include edginess, exaggerated startle response, and irritability, with concomitant decrements in concentration and sleeping. This symptom cluster is strikingly similar to Slater's formulation of prison anxiety.

Hyperarousal, irritability, and preoccupation with threats are likely to lead inmates to the classic fight or flight reaction. Strictly contained jail units preclude fleeing; inmates may feel compelled to respond to perceived threats with physical aggression. Additional research is needed to explicate the relationship between per-

ceived threats and both (1) overreactions to conflict resulting in violence and (2) preemptive assaults on the sources of perceived threats.

An unexpected finding was that multiple-time offenders experienced substantially more state than trait anxiety. Despite previous experiences in correctional settings, inmates do not appear to acclimatize to the uncertainty and potential threats of their environment. In examining for state anxiety the individual items most often endorsed (i.e., $\geq 50\%$ of all offenders), the following characteristics were observed: loss of self-confidence (65.1%), feeling strained (65.1%), inability to relax (60.5%), feeling ill at ease (55.0%), and feeling insecure (51.2%). Apparently, adjustment to the correctional environment creates widespread discomfort, stress, and anxiety. The pervasive uncertainty of jail inmates is likely to contribute to state anxiety. For pretrial defendants, the verdict and sentence are

Anxiety Among Inmates

impending and uncertain. For postsentence defendants, uncertainty is experienced either because of an imminent transfer to prison or concerns about the circumstances of their eventual release.

Unlike previous research, few ethnic differences were observed. One notable exception was the comparative lack of state anxiety among African Americans. The reasons for this finding are not entirely clear. When comparing first-time with multiple-time offenders, differences between state and trait anxiety were not found. One possible explanation was the proportion of multiple-time offenders among African Americans. However, an examination of the sample reveals comparable proportions of first-time and multiple-time offenders across the three ethnic groups.

In conclusion, triage models for correctional mental health care often focus on either severe disorders or highly problematic behavior, such as suicide attempts. Relatively absent from these intervention models is the consideration of important clinical concerns that may affect inmates' adjustment and the effective management of jail units. In the current study, we identified vigilance and scanning as prominent features of first-time offenders, while most offenders experienced substantial state anxiety. The containment of inmates is likely to force "fight" responses to perceived threats. In this regard, further studies are needed to explicate the relationship between (1) anxiety, hypervigilance, and perceived threats experienced by inmates and (2) the level of misconduct and assaultiveness occurring on jail units.

References

1. Briar KH: Jails: neglected asylums. *Soc Casework J Contemp Soc Work* 64:387-93, 1983
2. Snow WH, Briar KH: The convergence of the mentally disordered and the jail population. *J Offender Couns Serv Rehabil* 15:147-62, 1990
3. Teplin LA: Psychiatric and substance abuse disorders among male urban jail detainees. *Am J Public Health* 84:290-93, 1994
4. Collins JJ, Schlenger WE: The prevalence of psychiatric disorder among admissions to prison. Presented to American Society of Criminology, Denver, CO, November 9-13, 1983
5. Steadman HJ: Mental illness prevalence in New York prison. Albany, NY: New York Dept. of Mental Health, 1983
6. Swetz A, Salive ME, Stough TF, Brewer T: The prevalence of mental illness in a state correctional institution for men. *J Prison Jail Health* 8:3-15, 1989
7. Abram KM: The effect of co-occurring disorders on criminal careers: interaction of antisocial personality, alcoholism, and drug disorders. *Int J Law Psychiatry* 12:133-48, 1989
8. Hayes L: National study of jail suicide: seven years later. *Psychiatr Q* 60:7-29, 1989
9. Haycock J: Capital crimes: suicides in jail. *Death Stud* 15:417-33, 1991
10. Marcus P, Alcabes P: Characteristics of suicides by inmates in an urban jail. *Hosp Community Psychiatry* 44:256-61, 1993
11. Holley HL, Arbodea-Flores J, Love EJ: Lifetime prevalence of prior suicide attempts in a remanded population and relationship to current mental illness. *Int J Offender Therapy Comp Criminol* 39:191-209, 1994
12. Fawcett J: Predictors of early suicide: identification and appropriate intervention symposium: consequences of anxiety. *J Clin Psychiatry* 49:7-8, 1988
13. Ivanoff A: Identifying psychological correlates of suicidal behavior in jail and detention facilities. *Psychiatr Q* 60:73-84, 1989
14. Cimino AT: Management strategies for improving the delivery of mental health services in secure settings. *J Ment Health Admin* 14:7-13, 1987
15. Cohen F, Dvoskin J: Inmates with mental disorders: a guide to law and practice. *Ment Phys Disabil Law Rep* 16:462-70, 1992
16. Ogloff JR, Tien G, Roesch R, Eaves D: A model for the provision of mail mental health services: an integrative, community-based ap-

- proach. *J Ment Health Admin* 18:209–22, 1991
17. Silverman M, Vega M: Reactions of prisoners to stress as a function of personality and demographic variables. *Int J Offender Therapy Comp Criminol* 34:187–96, 1990
 18. Vega M, Silverman M: Stress and the elderly convict. *Int J Offender Therapy Comp Criminol* 32:153–62, 1988
 19. Slater RG: Psychiatric intervention in an atmosphere of terror. *Am J Psychiatry* 7:5–12, 1986
 20. MacKenzie, DL, Goodstein L: Long-term incarceration impacts and characteristics of long-term offenders: an empirical analysis. *Crim Just Behav* 12:395–414, 1985
 21. Rogers R, McKee GR: Use of the MMPI-2 in the assessment of criminal responsibility, in *Forensic Applications of the MMPI-2*. Edited by Ben-Porath YS, Graham JR, Hall GCN, Hirschman RD, Zaragoza MS. Newbury Park, CA: Sage, 1995, pp 103–26
 22. Neal AM, Turner SM: Anxiety disorder research with African Americans: current status. *Psychol Bull* 109:400–10, 1991
 23. Spitzer RL, Williams JBW, Gibbon M, First MB: *Structured Clinical Interview for DSM-III-R (SCID)*. Washington, DC: American Psychiatric Press, 1990
 24. Spielberger CD, Gorsuch RL, Lushene RE: *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press, 1972
 25. Morey LC: *Personality Assessment Inventory: Professional Manual*. Tampa: Psychological Assessment Resources, 1991
 26. Rogers R: *Diagnostic and Structured Interviewing: A Handbook for Psychologists*. Odessa, FL: Psychological Assessment Resources, 1995
 27. Chaplin WF: *State-Trait Anxiety Inventory*, in *Test Critiques (vol 1)*. Edited by Keyser DJ, Sweetland RC. Kansas City, MO: Test Corporation of America, 1984, pp 626–32
 28. Brown HJ, Gutsch KU: Cognitions associated with a delay of gratification task: a study with psychopaths and normal prisoners. *Crim Just Behav* 12:453–62, 1984
 29. MacKenzie DL: Age and adjustment to prison: interactions with attitudes and anxiety. *Crim Just Behav* 14:427–47, 1987
 30. Spielberger C: *Anxiety: current trends in theory and research*. New York: Academic Press, 1972
 31. Rogers R, Sewell KW, Ustad KL, Reinhardt V, Edwards W: The Referral Decision Scale in a jail sample of disordered offenders. *Law Hum Behav* 19:481–92, 1995
 32. Rogers R, Ustad KL, Salekin RT: Convergent validity of the Personality Assessment Inventory: a study of emergency referrals in a correctional setting. *Assessment* 5:3–12, 1998
 33. Wilkenson GS: *The Wide Range Achievement Test-3 administration manual*. Wilmington, DE: Wide Range Incorporated, 1993
 34. Hare RD, McPherson LM, Forth AE: Male psychopaths and their criminal careers. *J Clin Consult Psychol* 56:710–14, 1988
 35. Salekin RT, Rogers R, Sewell KW: Construct validity of psychopathy in a female offender sample: a multitrait–multimethod evaluation. *J Abnorm Psychol* 106:576–85, 1997