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Suicidal ideation in a United States jail: Demographic and psychiatric correlates

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Abstract

Suicidal behavior is a significant problem in United States jails. Suicidal ideation (SI) is an established precursor to suicidal behavior in incarcerated populations. No studies to date have examined the prevalence of SI or its correlates in a mixed gender U.S. jail sample. The purpose of the present study was to document rates of SI in a mixed gender jail sample and examine socio-demographic and psychiatric correlates. This study of 511 jail inmates found that approximately 16% of participants reported clinically significant SI upon incarceration. White participants, suicide attempters, and those with a psychiatric diagnosis history endorsed greater SI. Reported SI did not differ by sex and was not correlated with age. Clinically, results indicate that screening for SI in jail samples is necessary to identify high-risk individuals for intervention to prevent suicidal behavior.

Keywords

Suicidal ideation; incarceration; jail

Suicide is the second leading cause of death in U.S. jails (Metzner, 2002). Suicide rates in U.S. jails are three times higher than in prisons (Mumola, 2005) and nine times higher than in the general U.S. population (Daniel, 2006). Over 400 jail inmates complete suicide each year (Hayes, 2005). Moreover, there are approximately 80 suicide attempts for every suicide completion (Goss et al., 2002). Thoughts about suicide, also known as suicidal ideation (SI), often precede suicidal behavior and are strongly correlated with completed suicide and suicide attempts in prisoners (Fazel, Cartwright, Norman-Nott, & Hawton, 2008; Ivanoff, Jang, & Smyth, 1996) and the general population alike (Kachur et al., 1995; Lewinsohn et al., 1996; Beck et al., 1999; Borges et al., 2008). Up to 72% of prison suicide victims report SI to staff before their deaths (He et al., 2001). Moreover, 29% of male jail inmates report high-intent SI during incarceration (Bonner & Rich, 1990). When examined proximally, one study conducted with a Chinese prison sample found that 70% of inmates reported SI in the last week (Zhang, Grabiner, Zhou, & Li, 2010). Efforts are sorely needed to better understand the high rates of SI in inmates in general, and jail populations in particular, to better inform early identification, prevention, and intervention efforts.

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Notably, incarceration and/or the events leading up to it, cause significant life stress that may trigger SI in some inmates. Incarceration in jails is particularly stressful for several reasons. Researchers theorize that it represents a crisis for most inmates, who must cope with their arrest, and adjust to confinement and uncertainty about the legal process and its outcomes (Bonner & Rich, 1992; Bonner, 2000). Jail conditions are typically noisy, crowded, and poorly ventilated, creating a tense and stressful environment (Winkler, 1992). Hours of unstructured time and victimization by other inmates also foster an unsupportive environment. Additionally, isolation in the form of both segregation and disrupted interpersonal attachment can exacerbate the stress of the crisis of incarceration. Inmates are isolated from their support systems and trusted coping mechanisms. While some inmates are able to adapt to this stressful environment, others experience an onset or exacerbation of mental health problems, such as SI. Given the strong association between SI and suicidal behavior, the purpose of the present study is to identify socio-demographic and psychiatric factors correlates of SI in a U.S. jail.

Though not yet studied in relation to SI, the associations between socio-demographic variables and suicidal behavior in jails have been examined. White inmates complete suicide at higher rates than black or Hispanic inmates in U.S. jails (Hayes, 1989; Charles, 2003; Mumola, 2005; Mumola & Noonan, 2008), with rates three to six times higher among whites (Mumola, 2005). More recently, Hayes (2010) found that 67% of jail suicide victims were white, 15.1% were black, and 12.7% Hispanic. Suicide victims in U.S. jails are disproportionately males. Ninety percent of jail inmates are males, while 93% of jail suicide victims are males (Hayes, 2010). However, female jail inmates attempt suicide at higher rates than males (Goss et al., 2002; Charles et al., 2003). The average age of suicide victims in U.S. jails is in their 30s (Kennedy, 1984; Hayes, 1989; Goss et al., 2002; Mumola & Noonan, 2008), which mirrors the general jail population.

Unlike socio-demographic factors, the prevalence of psychiatric disorders among jail inmates who attempt or complete suicide has produced mixed results. Goss et al. (2002) found that 77% of jail inmates who made a suicide attempt reported a history of a chronic psychiatric problem, compared with 15% of the general jail population. Yet, Hayes (2010) found that only 38.1% of jail suicide victims reported a history of mental illness during the intake process. The author concluded that this rate was surprisingly low, given that a history of psychiatric diagnosis is reported by 64% of general population inmates in U.S. jails (James & Glaze, 2006) and by 90% of suicide victims in the community (Moscicki, 2001). Hayes (2010) posited that this low rate of reported mental illness among jail suicide victims may be due to inadequate intake screenings of mental health history in facilities where suicides occur. In fact, no data on mental health history was available for 30% of the sample in this cited study. Overall, results suggest that Axis I psychiatric disorders are associated with suicide attempts and completions in jails. Though not yet examined in a U.S. jail sample, studies also show a relationship between Axis I psychiatric disorders (current and lifetime) (Ivanoff et al., 1996; Sarchiapone et al., 2009) and past psychiatric hospitalizations (Lekka et al., 2006), and SI, in prison samples both nationally (U.S.) and internationally (Italy and Greece).

Cumulatively, research indicates that white race, young adulthood (30s), and psychiatric diagnoses are associated with suicidal *behavior* in jails. Moreover, females attempt but do not complete suicide at higher rates than males. Yet, little research has been conducted on socio-demographic and psychiatric risk factors for *SI* in U.S. jails, which as noted above, represents a particularly stressful environment for inmates. Given the strong association between *SI* and suicidal behavior, such knowledge could contribute to the early identification of *SI* and potentially prevent suicide attempts and completions among jail inmates. The present study will explore rates of *SI* in a U.S. jail sample and whether these correlates of suicidal behavior (race, gender, age, psychiatric diagnosis, suicide attempt) are also associated with *SI*.

Methods

Participants

Inmates ($N=511$) at a suburban jail participated in this study as part of a larger project (Tangney et al., 2007). Inclusion criteria included: 1) greater than 4-month term (time served in jail) or being held on at least one felony charge with no bond (i.e., amount required to allow a person to be released from jail until his or her case is completed)/bond greater than \$7000; 2) assignment to medium- or maximum-security general population; and 3) proficiency in English or Spanish. Participants were excluded if either the Infrequency or Inconsistency scale on the Personality Assessment Inventory exceeded recommended cutoffs ($74t$ and $72t$, respectively) and the other scale was elevated ($69t$) (Morey, 1991). The sample was 68% male, and diverse in terms of race/ethnicity (43% African-American, 36% Caucasian, 10% Latino, 3% Asian, 4% “Mixed,” 4% “Other”), and age ($M=32.19$ years, $SD=10.05$, 18–72).

Materials

Socio-Demographic variables were assessed during an interview by participants’ self-reported race, gender, and age. Psychiatric history (i.e., self report of history of Axis I diagnosis or psychiatric hospitalization) was also assessed during a clinical interview. Suicidal ideation was measured with the 12-item suicidality scale from the Personality Assessment Inventory (Morey, 1991). Clinical scores ($T>59$) suggest the presence of suicidal thinking and warrant clinical follow-up to further assess for potential for suicidal behavior (Morey, 1991).

Procedure

Eligible participants were approached several days after they had been incarcerated, presented with a study description by trained research assistants, and informed that study participation would not affect jail status or release date. Seventy-four percent of inmates invited to participate in the study agreed. Of those who agreed to participate, 86% completed the assessment, but 5% were excluded due to validity concerns on the PAI. A Certificate of Confidentiality was obtained from the Department of Health and Human Services to protect data. After informed consent, those who agreed to participate and completed a baseline assessment consisting of an interview and study questionnaires received \$15–\$18. Interviews were conducted by trained research assistants in professional visiting rooms to

ensure confidentiality. Participants with sufficient English verbal comprehension used a touch-screen computer to complete study questionnaires. The computer read each question aloud via headphones to accommodate those participants with limited reading ability. Individual interviews were conducted with participants requiring Spanish versions of the questionnaires, in which both the interviewer and participant had copies of the translated measures. This study received full approval from the Human Subjects Review Board.

Data Analysis

Descriptive statistics and intercorrelations of study variables were conducted. Independent samples t-tests were used to examine group differences in race (white vs. black), sex (male vs. female), age (median split), history of suicide attempt (suicide attempt vs. no attempt), and mental health history (psychiatric diagnosis vs. no psychiatric diagnosis).

Results

Intercorrelations of study variables are shown in Table 1. Approximately 16% of participants reported clinically significant SI ($T > 59$) ($M=50.92$, $SD=11.01$). Results of independent samples t-tests revealed that white vs. black participants $t(409) = -3.37$, $p < .01$, suicide attempters vs. non-attempters $t(446) = -9.76$, $p < .001$, and those with vs. without a psychiatric diagnosis history $t(317) = -3.89$, $p < .001$ endorsed greater SI. SI did not differ by sex $t(509) = -.04$, $p = .97$. Age was not significantly correlated with SI.

Discussion

Though many correctional institutions have taken steps to prevent suicide, such as implementing suicide screening and prevention programs, research suggests that these efforts have not been met with great success. Indeed, results of a psychological autopsy study conducted on 464 U.S. jail inmates who completed suicide revealed that 47% of victims were assessed by a clinician within three days of their death (Hayes, 2010). Thus, research is greatly needed to better identify those at risk for suicide in jail populations. Given that SI is strongly associated with and typically precedes suicidal behavior, the present study examined socio-demographic (race, gender, age) and psychiatric correlates of SI in a U.S. jail sample in effort to identify those at heightened risk for suicide. To our knowledge, this is also the first study to report rates of SI in a mixed gender U.S. jail sample. Notably, approximately 16% of inmates reported clinically significant SI *upon* incarceration. This rate is lower than that reported in a prior study (29%) that examined SI among male inmates at various points *during* the incarceration period (Bonner & Rich, 1990). However, the present study included both sexes and used a different measure of SI (PAI versus Beck Scale for Suicidal Ideation). Alternatively, this discrepancy may also suggest that rates of SI increase, or inmates are more willing to report SI, after they have been incarcerated for a period of time.

Participants who reported white race (vs. black) and/or a history of psychiatric diagnosis or suicide attempt (vs. those without these histories) endorsed significantly higher SI. These results are consistent with prior research indicating that white inmates, those with suicide attempt histories, and those with histories of psychiatric diagnoses are more likely to engage

in suicidal behavior (Hayes, 1989, 2010; Goss et al., 2002; Mumola, 2005; Mumola & Noonan, 2008), and suggest that these findings may extend to U.S. jail inmates. Interestingly, sex and age differences in SI were not found in the present study, consistent with one prior study that also failed to find sex differences (Zhang et al., 2010). This lack of difference may reflect that the negative effects of incarceration (e.g., isolation, loss of support), which may precipitate SI, are experienced equally as strongly across males and females as well as older versus younger inmates.

Clinically, results suggest that mental health screening in jail samples is indicated to identify high-risk individuals, implement appropriate safety measures, and direct them to needed care to prevent suicidal behavior. Those who are white and/or endorse a psychiatric diagnosis or suicide attempt history may be at greatest risk for SI upon incarceration. Although this study offers novel findings in a U.S. jail population and holds important clinical implications, results should be considered in the context of several limitations. First, the measure of SI used did not contain great detail about the nature of suicidal thoughts. Future research should employ measures of suicidal thoughts and behaviors that capture frequency, intensity, and purpose of these thoughts and behaviors in order to better understand these relationships. Additionally, SI was only measured upon incarceration. Assessment of SI at multiple time points could provide a better understanding of the course of SI throughout incarceration, as well as any fluctuations. It will also be important to examine clinical risk factors (e.g., depression, shame/guilt) that are amenable to change to build upon this research.

References

- Beck AT, Brown GK, Steer RA, Dahlsgaard KK, Grisham JR. Suicide ideation at its worst point: A predictor of eventual suicide in psychiatric outpatients. *Suicide and Life-Threatening Behaviors*. 1999; 29:1–9.
- Bonner R. Correctional suicide prevention in the year 2000 and beyond. *Suicide and Life-Threatening Behavior*. 2000; 30(4):370–376. [PubMed: 11210062]
- Bonner RL, Rich AR. Psychosocial vulnerability, life stress, and suicide ideation in a jail population: A cross-validation study. *Suicide and Life-Threatening Behavior*. 1990; 20:213–224. [PubMed: 2238014]
- Borges G, Angst J, Nock MK, Ruscio AM, Kessler RC. Risk factors for the incidence and persistence of suicide-related outcomes: A 10-year follow-up study using the National Comorbidity Surveys. *Journal of Affective Disorders*. 2008; 105:25–33. [PubMed: 17507099]
- Charles DR, Abram KM, McClelland GM, Teplin LA. Suicidal ideation and behavior among women in jail. *Journal of Contemporary Criminal Justice*. 2003; 19(1):65–81.
- Daniel AE, Fleming J. Suicides in a state correctional system, 1992–2002: A review. *Journal of Correctional Health Care*. 2006; 12(1):24–35.
- Fazel S, Cartwright J, Norman-Nott A, Hawton K. Suicide in prisoners: A systematic review of risk factors. *Journal of Clinical Psychiatry*. 2008; 69(11):1721–1731. [PubMed: 19026254]
- Goss JR, Peterson K, Smith LW, Kalb K, Brodey BB. Characteristics of suicide attempts in a large urban jail system with an established suicide prevention program. *Psychiatric Services*. 2002; 55(5): 574–579. [PubMed: 11986506]
- Hayes L. National study of jail suicides: Seven years later. *Psychiatric Quarterly*. 1989; 60:7–29. [PubMed: 2813644]
- Hayes, L. Suicide prevention in correctional facilities. In: Scott, C.; Gerbaso, J., editors. *Handbook of Correctional Mental Health*. Washington, DC: APA; 2005.

- Hayes, L. National Institute of Corrections. National study of jail suicide: 20 years later (024308). 2010. Retrieved from U.S. Department of Justice website: <http://prevention.mt.gov/suicideprevention/SuicideStudy-20YearsLater.pdf>
- He X, Felthous AR, Holzer CE, Nathan P, Veasey S. Factors in prison suicide: one year study in Texas. *Jail Suicide/Mental Health Update*. 2001; 10(4):1–7.
- Ivanoff A, Jang SJ, Smyth NJ. Clinical risk factors associated with parasuicide in prisons. *International Journal of Offender Therapy and Comparative Criminology*. 1996; 40(2):135–146.
- James DJ, Glaze LE. Mental health problems of prison and jail inmates. Bureau of Justice Statistics Special Report. 2006
- Kachur, SP.; Potter, LB.; James, SP.; Powell, KE. Suicide in the United States 1980–1992 Violence Surveillance Summary Series No.1. Atlanta, GA: Centers for Disease Control and Prevention; 1995.
- Kennedy DB. A theory of suicide while in police custody. *Journal of Police Science & Administration*. 1984; 12(2):191–200.
- Lekka NP, Argyriou AA, Beratis S. Suicidal ideation in prisoners: Risk factors and relevance to suicidal behavior: A prospective case-control study. *European Archives of Psychiatry and Clinical Neuroscience*. 2006; 256(2):87–92. [PubMed: 16021531]
- Lewinsohn PM, Rohde P, Seeley JR. Adolescent suicidal ideation and attempts: Prevalence, risk factors, and clinical implications. *Clinical Psychology- Science and Practice*. 1996; 3:25–46.
- Metzner J. Class action litigation in correctional society. *Journal of the American Academy of Psychiatry and the Law*. 2002; 30:19–29. [PubMed: 11931366]
- Morey, LC. The Personality Assessment Inventory Professional Manual. Odessa, FL: Psychological Assessment Resources; 1991.
- Moscicki EK. Gender differences in completed and attempted suicides. *Annals of Epidemiology*. 1994; 4(2):152–158. [PubMed: 8205283]
- Mumola, C.; Noonan, M. Deaths in custody statistical tables. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics; 2008.
- Mumola, C. Suicide and homicide in state prisons and local jails. Special Report. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics; 2005.
- Sarchiapone M, Carli V, Di Gianantonio M, Roy A. Risk factors for attempting suicide in prisons. *Suicide and Life-Threatening Behavior*. 2009; 39(3):343–350. [PubMed: 19606925]
- Tangney JP, Stuewig J, Mashek D. Moral emotions and moral behavior. *Annual Review of Psychology*. 2007; 58:345–372.
- Winkler GE. Assessing and responding to suicidal jail inmates. *Community Mental Health Journal*. 1992; 28(4):317–326. [PubMed: 1643840]
- Zhang J, Liang B, Zhou Y, Brame W. Prisons inmates' suicidal ideation in China: A study of gender differences and their impact. *International Journal of Offender Therapy and Comparative Criminology*. 2010; 54(6):959–983. [PubMed: 19793912]

Table 1

Intercorrelations (r) Between Variables of Interest (N=511)

Variable	1	2	3	4	5	6
1. SI	-	-.04	.00	.13 ^{***}	.21 ^{***}	.42 ^{***}
2. Age		-	-.14 ^{***}	-.02	.19 ^{***}	.05
3. Gender (female=1, male=2)			-	-.06	-.05	-.14 ^{***}
4. Race (black=1, white=2)				-	.25 ^{***}	.13 ^{***}
5. History of Psychiatric Diagnosis					-	.37 ^{***}
6. History of Suicide Attempt (absent=0)						-

Note.

^{***} $p < .01$.