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RESEARCH ARTICLE

Prevalence and Correlates of Self-Injurious Behaviors Among Justice-Involved Youth

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Abstract

An estimated one in five adolescents exhibit self-injurious behavior (SIB), which poses serious public health concerns. The present analysis aims to describe the prevalence and correlates of lifetime SIB among first-time offending court-involved nonincarcerated youth. Baseline data from 412 youth enrolled in Epidemiological Project Involving Children in the Court (EPICC), a longitudinal cohort study, were analyzed to identify the prevalence and correlates of lifetime SIB. Almost a quarter (22.4%) of youth self-reported lifetime SIB. Participants who were female, bisexual, and those with more severe post-traumatic stress symptoms had higher prevalence odds of lifetime SIB. These findings suggest the importance of screening for SIB among youth and may provide guidance in the development of interventions designed to improve health outcomes of adolescents who come into first contact with the juvenile justice system.

Keywords: self-injurious behavior, adolescents, court-involved, mental health

Introduction

Self-injurious behavior (SIB), defined as deliberate bodily harm without the intention of suicide (Nock, 2010), is highly prevalent among adolescents, with an estimated lifetime prevalence ranging between 13.0% and 23.2% (Jacobson & Gould, 2007). SIB onset typically occurs between the ages of 12 and 14 years (Jacobson & Gould, 2007; Muehlenkamp & Gutierrez, 2004) and increases in prevalence through adolescence (Barrocas *et al.*, 2015). While the prevalence of SIB decreases during late adolescence (Plener *et al.*, 2015), SIB can develop into a chronic behavior that extends into adulthood (Barrocas *et al.*, 2015).

In addition to the immediate physical harm caused by SIB, individuals who exhibit SIB are at significantly elevated risk for other psychological disorders (Jacobson & Gould, 2007; Nock *et al.*, 2006), such as depression, anxiety, suicidal behaviors, and substance use disorders (Casiano *et al.*, 2013). A recently published literature review reported that, among adolescents who exhibit SIB, 88.9% met the criteria of a depressive disorder (Jacobson

& Gould, 2007), 42% to 58% were diagnosed with major depressive disorder (Kumar *et al.*, 2004; Nock *et al.*, 2006), and approximately 60% had a substance use disorder (Nock *et al.*, 2006).

Studies have demonstrated that first-time offending, court-involved, nonincarcerated (FTO-CINI) youth have an elevated risk of poor mental health outcomes, with an estimated 14% having endorsed a lifetime history of suicidal ideation or attempts (Kemp *et al.*, 2016). Risk behaviors of FTO-CINI youth have not been well studied, but there is evidence that their risk behaviors closely resemble that of incarcerated adolescents (Tolou-Shams *et al.*, 2012, 2015), who have higher than general adolescent population rates of substance use and sexual risk behaviors (Tolou-Shams *et al.*, 2012). SIBs among FTO-CINI youth have not been well studied despite the growing body of literature characterizing SIB among incarcerated adolescents (Casiano *et al.*, 2013, 2016; Kenny *et al.*, 2008; Lader *et al.*, 2003; McReynolds *et al.*, 2017). Understanding the risk behaviors of FTO-CINI youth is of particular significance because their

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first contact with the juvenile justice system represents an opportune moment for mental health assessment and intervention. The present analysis aims to describe the prevalence of SIB among FTO-CINI youth and to examine factors associated with a history of SIB to identify potential points of intervention to improve overall mental health and justice system-related outcomes among FTO-CINI youth.

Method

Source Population

This cross-sectional analysis was conducted by analyzing baseline data collected by EPICC (Epidemiological Project Involving Children in the Court, $N=423$), a longitudinal cohort study that investigates drug use, sexual risk behavior, recidivism, and overall health trajectories of FTO-CINI youth. Participants and their guardians were recruited from a family court in New England. Study assessments were conducted between June 2014 and July 2016. Juveniles who were eligible to enroll in EPICC were proficient in English, were between the ages of 12 and 18 years at the initial court intake appointment, and had a caregiver who was willing to participate in the study. Juveniles were ineligible if they were repeat offenders or had a cognitive impairment that would affect their ability to complete their assessment. The principal investigator's university and collaborating sites' institutional review boards (and Office for Human Research Protections) approved all recruitment and study procedures.

Study Sample

The study sample for this analysis included EPICC participants who answered the question in the survey that asked about history of SIB. Of the 423 participants of EPICC, 9 participants were missing values for history of SIB. In addition, two transgender participants were removed from the study sample due to lack of power to analyze results in this subgroup. Therefore, a final sample of 412 participants met the analysis inclusion criteria.

Measures

The outcome of interest was history of SIB. Participants were asked, "Have you ever intentionally cut your body using pins, knives, razor blades, safety pins, or other things?" to which they responded "yes" or "no."

We evaluated a number of correlates of interest based on literature examining risk factors for SIB in other adolescent samples (Bresin & Schoenleber, 2015; Victor *et al.*, 2018). Demographic characteristics evaluated in this analysis included age, gender, ethnicity, race, household income, receipt of public assistance, whether the participant lives with his/her mother, whether the participant lives with his/her father, grade most recently completed, history of school expulsion, ever had sex, and sexual orientation. Household income and receipt of pub-

lic assistance data were self-reported by the primary caregiver, and all other variables were self-reported by the FTO-CINI youth. History of substance use evaluated included past 4 months use of alcohol, nonprescribed prescription medication (OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, Xanax), marijuana, and any other illicit drugs (including methamphetamine, cocaine, heroin, hallucinogenic drugs, and club drugs). Dating violence in the 4 months was also included in this analysis.

The following previously validated scales were also included as independent variables:

Impulsive Decision Making. Participants responded to an 11-item scale that quantifies impulsivity (Donohew *et al.*, 2000). Participants responded to items (such as "When I do something, I don't even think about it; I just do it" and "When I do something, I do the first thing that comes to mind") by indicating how frequently they agree with the statements using a 4-point Likert scale (1 = never, 2 = sometimes, 3 = often, 4 = always). The scores were summed, with scores ranging from 11 to 44 and higher scores indicating more impulsive decision-making (IDM) behaviors.

Post-Traumatic Stress Symptoms. The National Stressful Events Survey PTSD Short Scale (NSESSS) was used to measure severity of post-traumatic stress disorder (PTSD; LeBeau *et al.*, 2014). Participants responded to nine items (such as "Feeling very emotionally upset when something reminds you of a stressful experience?" and "Trying to avoid thoughts, feelings, or physical sensations that reminded you of a stress experience?") by indicating how much they have been bothered during the past 7 days by each item that occurred or became worse after an extremely stressful event/experience. Responses were provided using a 6-point Likert scale (1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, 5 = extremely, 6 = I have never experienced a stressful event), which were then recoded to match the original measure scoring and then summed, with scores ranging from 0 to 36 and higher scores indicating greater severity of PTSD.

Emotional and Behavioral Symptoms. The Behavior Assessment System for Children Second Edition Self Report of Personality-Adolescent (BASC) was used to measure anxiety and depression symptoms (Reynolds & Kamphaus, 2004). Participants responded to 176 statements, such as "I used to be happier" on a 4-point Likert scale (0 = never, 1 = sometimes, 2 = often, 3 = almost always). The scores were first transformed into *t*-scores using the BASC-2 ASSIST program, and then were dichotomized to indicate whether the respondents had clinically high levels of emotional and behavioral disorder symptoms ($T\text{-score} \geq 60$). This study included the

BASC scales for anxiety and depression. The BASC also includes five validity scales that gauge the reliability of participant responses, which categorizes responses as “acceptable,” “low caution or caution,” or “extreme caution.” Participants whose responses were labeled “extreme caution” and those whose BASC scores were missing were categorized as having “missing/invalid” BASC scores. The dichotomized outcomes for the anxiety and depression scales were then recoded into one variable due to collinearity between the two variables. The possible values for this derived variable included “anxiety and depression,” “only anxiety,” “only depression,” “neither anxiety nor depression,” and “invalid/unreliable response.”

Statistical Analysis

We compared demographic characteristics, substance use history, dating violence history, IDM, post-traumatic stress, anxiety, and depression symptoms between those with and without a history of SIB. Bivariable analyses were conducted using χ^2 tests for categorical variables and *t*-tests for continuous variables.

We performed unadjusted and adjusted analyses using modified Poisson regression models, which is an appropriate alternative to logistic regression since the outcome of interest is nonrare (Zou, 2004). Since the participants are in adolescence, we only controlled for early life demographic variables in model 1 (i.e., gender, sexual orientation, race, and age). Model 2 included all variables included in model 1 as well as IDM score, NSESSS score, and the BASC scale outcomes. All statistical tests were conducted in SAS 9.4 (Cary, NC).

Results

Study Sample Characteristics

The mean age of the 412 participants included in this analysis was 14.5 years (standard deviation=1.9) (Table 1). Just over half of the sample were male (54.4%) compared with 51% in the general population. The majority were heterosexual (81.3%) and just under half (44.0%) were Hispanic/Latinx. Almost half of the participants were of other/mixed race (47.8%), 38.6% were White, and 13.7% were Black, while nearly three quarters of adolescents in the general population of Rhode Island are non-Hispanic White (72.5%).

Bivariable Analyses

In the bivariable analyses presented in Table 2, females had a higher prevalence of SIB than males (prevalence ratio [PR]=3.7, 95% confidence interval [CI]=2.4–5.7). Youth who were homosexual (PR=3.2, 95% CI=1.7–6.0), bisexual (PR=4.0, 95% CI=2.8–5.6), or questioning/other (PR=3.0, 95% CI=1.6–5.4) had a higher prevalence of SIB than heterosexual youth. Greater post-traumatic stress

symptom severity (PR=1.05, 95% CI=1.04–1.07), depression (PR=3.0, 95% CI=1.9–4.7), and both anxiety and depression (PR=3.8, 2.6–5.5) were also associated with history of SIB.

Multivariable Analyses

Model 1. Model 1 included gender, sexual orientation, race, and age (Table 2). Females had 2.8 (95% CI=1.7–4.5) times higher prevalence of having a history of SIB than males. Homosexual (aPR=2.3, 95% CI=1.3–3.9), bisexual (aPR=2.5, 95% CI=1.8–3.6), and questioning/other youth (aPR=2.1, 95% CI=1.1–3.8) were all found to have a higher prevalence of having a history of SIB than heterosexual youth.

Model 2. Model 2 included gender, sexual orientation, race, age, IDM, post-traumatic stress symptoms, anxiety, and depression. In this model, being female (aPR=2.7, 95% CI=1.6–4.6) or bisexual (aPR=1.9, 95% CI=1.3–2.8) were both associated with a higher prevalence of SIB among FTO-CINI youth. In addition, greater post-traumatic stress symptom severity (aPR=1.03, 95% CI=1.01–1.05) was also positively associated with a higher prevalence of SIB.

Discussion

We found that a large proportion (22.4%) of FTO-CINI youth have a history of SIB. A literature review of studies examining SIB among adolescents estimated that the lifetime prevalence of SIB among adolescents falls between 13.0% and 23.3%, putting our estimate near the high end of this range. However, the average age of our sample was 14.5 years, which implies that as they approach young adulthood, their lifetime prevalence of SIB during their adolescent years may rise. Although the rates of SIB do not appear to differ from that of the general population, we believe that screening efforts among court-involved youth may help them gain access to mental health services since research has shown that justice-involved populations are at high risk for mental health disorders and that engaging in SIB is often a precursor for poor mental health outcomes. There is also evidence that SIB among adolescents is becoming more common: Muehlenkamp and Gutierrez found that the lifetime prevalence of SIB among high school students was 15.9% (2004), and at the same high school 3 years later, the rate was 23.2% (2007).

We found that females had higher odds of history of SIB than males, which corroborates several other studies (Ross & Heath, 2002; Sornberger *et al.*, 2012). A possible explanation of this gender difference may be how SIB is defined in research. According to Ross and Heath, it is possible that females and males may engage in different types of SIB (Ross & Heath, 2002), with females more

Table 1. Sociodemographic Characteristics, Behavioral Characteristics, and History of Self-Injurious Behavior Among First-Time Offending Court-Involved Nonincarcerated Youth (N = 412)

<i>Characteristic</i>	<i>Total sample (N = 412)</i>	<i>FTO-CINI youth with no history of SIB (n = 318)</i>	<i>FTO-CINI youth with a history of SIB (n = 94)</i>	<i>Prevalence ratio (95% CI)</i>	<i>p</i>
Age (mean, SD)	14.5 (1.9)	14.5 (1.6)	14.4 (2.8)	1.0 (0.9–1.4)	0.7711
Gender					
Female	187 (45.6)	118 (37.1)	69 (75.0)	3.7 (2.4–5.8)	<0.0001
Male	223 (54.4)	200 (62.9)	23 (25.0)	—	—
Ethnicity					
Not Hispanic/Latinx	227 (56.1)	116 (53.4)	61 (64.9)	—	—
Hispanic/Latinx	178 (44.0)	145 (46.6)	33 (35.1)	0.7 (0.5–1.0)	0.0744
Race					
White	155 (38.6)	111 (35.8)	44 (47.8)	—	—
Black	55 (13.7)	47 (15.2)	8 (8.7)	0.6 (0.3–1.1)	0.0878
Other/mixed race	192 (47.8)	162 (49.0)	40 (43.5)	0.7 (0.5–1.1)	0.1042
Sexual orientation					
Heterosexual	327 (81.3)	279 (89.7)	48 (52.8)	—	—
Homosexual	14 (3.5)	7 (2.25)	7 (7.7)	3.2 (1.7–6.0)	<0.0001
Bisexual	44 (11.0)	17 (5.5)	27 (29.7)	4.0 (2.8–5.6)	0.0002
Questioning/other	17 (4.2)	8 (2.6)	9 (9.9)	3.2 (1.8–5.6)	<0.0001
Household income					
\$0–\$9,999	79 (19.2)	68 (21.4)	11 (11.7)	—	—
\$10,000–\$19,999	109 (26.5)	87 (27.4)	22 (23.4)	1.2 (0.6–2.3)	0.6681
\$20,000–\$39,999	116 (28.2)	89 (28.0)	27 (28.7)	1.6 (0.9–3.1)	0.1239
\$40,000–\$59,999	41 (10.0)	27 (8.5)	14 (14.9)	2.0 (1.0–4.2)	0.0516
\$60,000+	48 (11.7)	33 (10.4)	15 (16.0)	2.0 (1.0–4.0)	0.0495
Missing	19 (4.6)	14 (4.4)	5 (5.3)	2.0 (0.8–5.0)	0.1296
Family receives public assistance					
No	145 (35.3)	99 (31.2)	46 (48.9)	—	—
Yes	266 (64.7)	218 (68.8)	48 (51.1)	0.6 (0.4–0.8)	0.0022
Lives with his/her mother					
No	29 (7.1)	17 (5.4)	12 (12.8)	1.9 (1.1–3.1)	0.0134
Yes	379 (92.9)	297 (94.6)	82 (87.2)	—	—
Lives with his/her father					
No	119 (49.4)	159 (51.3)	40 (43.0)	0.7 (0.5–1.0)	0.0782
Yes	204 (50.6)	151 (48.7)	53 (57.0)	—	—
Grade most recently completed					
5–8	159 (38.6)	128 (40.3)	31 (33.0)	—	—
9–12	249 (60.4)	188 (59.1)	61 (64.9)	1.1 (0.7–1.7)	0.5965
HS/GED/dropped out	4 (1.0)	2 (0.6)	2 (2.1)	2.3 (0.8–6.6)	0.1055
Ever been expelled from school					
No	378 (92.4)	288 (91.1)	90 (96.8)	—	—
Yes	31 (7.6)	28 (8.9)	3 (3.2)	0.3 (0.1–1.1)	0.0657
Ever had sex					
No	247 (60.0)	209 (65.7)	38 (40.4)	—	—
Yes	165 (40.1)	109 (34.3)	56 (59.6)	2.2 (1.5–3.3)	<0.0001
Ever given a mental health diagnosis					
No	310 (75.2)	268 (84.3)	42 (44.7)	—	—
Yes	85 (20.6)	37 (11.6)	48 (51.1)	4.0 (2.8–5.6)	<0.0001
Missing	17 (4.1)	13 (4.1)	4 (4.3)	1.8 (0.6–4.9)	0.2679
Ever drank alcohol					
No	278 (67.5)	231 (72.6)	47 (50.0)	—	—
Yes	134 (32.5)	87 (27.36)	47 (50.0)	2.1 (1.5–2.9)	<0.0001
Drank alcohol in the past 4 months					
No	321 (77.9)	260 (81.8)	61 (64.9)	—	—
Yes	91 (22.1)	58 (18.2)	33 (35.1)	1.9 (1.3–2.7)	0.0009

(continued)

Table 1. (Continued)

Characteristic	Total sample (N=412)	FTO-CINI youth with no history of SIB (n=318)	FTO-CINI youth with a history of SIB (n=94)	Prevalence ratio (95% CI)	p
Ever used marijuana					
No	211 (51.2)	179 (56.3)	32 (34.0)	—	—
Yes	201 (48.8)	139 (43.7)	62 (66.0)	2.0 (1.4–3.0)	0.0003
Used marijuana in the past 4 months					
No	250 (60.7)	209 (65.7)	41 (43.6)	—	—
Yes	162 (39.3)	109 (34.3)	53 (56.4)	1.9 (1.3–2.8)	0.0006
Ever used any other illicit drugs					
No	382 (92.7)	307 (96.5)	75 (79.8)	—	—
Yes	30 (7.3)	11 (3.5)	19 (20.2)	3.2 (2.3–4.5)	<0.0001
Used any other illicit drugs in the past 4 months					
No	396 (96.1)	310 (97.5)	86 (91.5)	—	—
Yes	16 (3.9)	8 (2.5)	8 (8.5)	2.1 (1.2–3.7)	0.0118
Ever used any nonprescribed prescription medication					
No	384 (93.2)	306 (96.2)	78 (83.0)	—	—
Yes	28 (6.8)	12 (3.8)	16 (17.0)	2.8 (1.9–4.1)	<0.0001
Used any nonprescribed prescription medication in the past 4 months					
No	401 (97.3)	313 (98.4)	88 (93.6)	—	—
Yes	11 (2.7)	5 (1.6)	6 (6.4)	2.0 (0.9–4.2)	0.0793
Experienced dating violence in the past 4 months					
No	383 (93.0)	300 (94.3)	83 (88.3)	—	—
Yes	29 (7.0)	18 (5.7)	11 (11.7)	1.8 (1.1–3.0)	0.0218
IDM score (mean, SD)	25.5 (5.0)	25.1 (4.9)	26.1 (5.4)	1.0 (1.0–1.1)	0.1781
NSESSS score (mean, SD)	10.2 (9.6)	8.1 (8.5)	16.4 (10.0)	1.1 (1.0–1.1)	<0.0001
BASC scale—anxiety					
Nonclinical	333 (80.8)	269 (84.6)	64 (68.1)	—	—
Clinical	49 (11.9)	21 (6.6)	28 (29.8)	2.8 (2.0–4.0)	<0.0001
Missing/invalid	30 (7.3)	28 (8.8)	2 (2.1)	0.4 (0.1–1.7)	0.2277
BASC scale—depression					
Nonclinical	315 (76.5)	260 (81.8)	55 (58.5)	—	—
Clinical	67 (16.3)	30 (9.4)	37 (39.4)	3.2 (2.3–4.5)	<0.0001
Missing/invalid	30 (7.3)	28 (8.8)	2 (2.1)	0.5 (0.1–1.9)	0.3039

Counts may not add up to column totals due to missingness. Percentages may not add up to 100% due to rounding.

BASC=Behavior Assessment System for Children Second Edition Self Report of Personality–Adolescent; CI=confidence interval; FTO-CINI=first-time offending court-involved nonincarcerated; IDM=impulsive decision making; NSESSS=National Stressful Events Survey PTSD Short Scale; SD=standard deviation; SIB=self-injurious behavior.

likely to engage in cutting, which is often the method of self-harm researchers use to define SIB. A study published by Sornberg *et al.* (2012) also found evidence that there are gender differences in the method of self-injury, with females more likely to scratch or cut themselves and males more likely to burn themselves, bang their heads, and punch themselves. Since the definition of SIB used in this study was specific to cutting with sharp objects, our results only reflect SIB specific to cutting. Another possible explanation is that adolescent males are less likely to self-report history of SIB (Heath *et al.*, 2008).

Our finding that sexual minority youth have higher odds of history of SIB is also consistent with previous research (Swannell *et al.*, 2016; Taliaferro & Muehlenkamp, 2017; Tsypes *et al.*, 2016). A common explanation for this phenomenon is grounded in the minority stress

model, which suggests that sexual minorities are at greater risk for poorer physical and mental health outcomes due to the stressors that are uniquely experienced by sexual minorities, which are compounded on the everyday stressors experienced by heterosexuals (Meyer, 2003). Other studies have also reported that bisexuals have the greatest odds of history of SIB (Shearer *et al.*, 2016; Stone *et al.*, 2014; Taliaferro & Muehlenkamp, 2017). Bisexual adolescents may experience lack of acceptance by both heterosexual and homosexual peers, which researchers theorize may result in less connectedness to the greater sexual minority community (Brewster & Moradi, 2010).

Our findings also support existing literature that suggests that a large proportion of those with a history of SIB also have mental health disorders or experience mental health symptoms (Brewster & Moradi, 2010; Haw

Table 2. Correlates of Self-Injurious Behavior Among First-Time Offending, Court-Involved, Nonincarcerated Youth in Rhode Island (N = 410)

	Bivariable		Model 1		Model 2	
	Unadjusted prevalence odds (95% CI)	p	Adjusted prevalence odds (95% CI)	p	Adjusted prevalence odds (95% CI)	p
Gender (male)						
Female	3.7 (2.4–5.7)	<0.0001	2.8 (1.7–4.5)	<0.0001	2.7 (1.6–4.6)	0.0003
Male	—	—	—	—	—	—
Sexual orientation						
Heterosexual	—	—	—	—	—	—
Homosexual	3.2 (1.7–6.0)	0.0003	2.3 (1.3–3.9)	0.0027	1.6 (0.8–3.1)	0.1496
Bisexual	4.0 (2.8–5.6)	<0.0001	2.5 (1.8–3.6)	<0.0001	1.9 (1.3–2.8)	0.0020
Questioning/other	3.0 (1.6–5.4)	0.0004	2.1 (1.1–3.8)	0.0165	1.8 (0.9–3.6)	0.1264
Race						
White	—	—	—	—	—	—
Black	0.6 (0.3–1.1)	0.0878	0.6 (0.3–1.1)	0.103	0.6 (0.3–1.3)	0.2161
Other	0.7 (0.5–1.7)	0.1042	0.7 (0.5–1.0)	0.0427	0.8 (0.5–1.1)	0.1557
Age	1.0 (0.9–1.1)	0.7711	1.1 (0.9–1.2)	0.332	1.1 (0.9–1.2)	0.3213
IDM Score	1.03 (0.99–1.06)	0.1781	—	—	1.01 (0.97–1.06)	0.5055
NSESS Score	1.05 (1.04–1.07)	<0.0001	—	—	1.03 (1.01–1.05)	0.0071
BASC Scale						
Anxiety and depression	3.8 (2.6–5.5)	<0.0001	—	—	1.3 (0.7–2.4)	0.3249
Only anxiety	2.2 (1.0–5.0)	0.0636	—	—	1.3 (0.7–2.5)	0.4229
Only depression	3.0 (1.9–4.7)	<0.0001	—	—	1.5 (0.9–2.5)	0.1693
Neither anxiety nor depression	—	—	—	—	—	—
Invalid/unreliable response	0.5 (0.1–2.0)	0.3448	—	—	0.5 (0.1–2.4)	0.3787

et al., 2001; Nock *et al.*, 2006; Rudd *et al.*, 2004; Suominen *et al.*, 1996). Nock *et al.* (2006) reported that 87.6% of adolescents who exhibit SIB met criteria for psychiatric disorders and 67.3% met criteria for personality disorders. Haw *et al.* (2001) reported that 92% of those who exhibit SIB have psychiatric disorders, with 72% experiencing depression. The results from this study and from previous research suggest that the presence of SIB may be a strong indicator that more comprehensive mental health evaluations are necessary.

There are several limitations worth noting. First, the cross-sectional nature of this analysis prevents us from inferring causality of associations; however, we will be able to separately evaluate temporality as longitudinal data become available as part of the larger study. Second, all data were self-report and could be influenced by recall and/or social desirability bias. Third, SIB was not the primary outcome of EPICC, which limited the number of SIB-related questions included in the questionnaire. There is likely underreporting of SIB among our study sample since participants could have self-injured through other methods that were not captured by our questionnaire. Despite these limitations, this is the first published study to describe SIB among CINI youth and self-reported rates suggest that SIB is a serious public health issue. In addition, we are also confident in our findings since nearly all of our results are supported by existing studies.

The large proportion of youth in this study endorsing SIB at the first court contact further supports that many youth enter the juvenile justice system with significant unmet mental health needs. The most common mental health screening tool used in juvenile justice settings, the MAYSI-2, provides a broad screening of mental health symptoms including suicide ideation but does not measure SIB (Grisso *et al.*, 2001). The prevalence of lifetime SIB among FTO-CINI youth did not differ greatly from that of the general adolescent population's; however, expanding existing mental health screenings to include SIB will allow for the provision of more comprehensive mental health care. Screening that includes SIB at the earliest stages of juvenile justice involvement could help youth gain access to treatment and prevent serious injury as well as unintentional or intentional death. However, juvenile justice agencies are not alone in this effort. This public health opportunity must be shared with child behavioral health agencies. Collaboration between behavioral health and juvenile justice systems is the key to promote enhanced screening efforts of SIB with FTO-CINI youth and cross-training in available local interventions to improve access to evidenced-based treatment, such as structured psychotherapeutic approaches and pharmacological interventions (Turner *et al.*, 2014). The benefits of this collaboration are twofold: In addition to improving access to care, it could prevent situations

wherein untreated mental health symptoms destabilize a youth's ability to address other risk factors directly linked to worsening juvenile justice system involvement.

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Disclaimer

The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Drug Abuse, National Institute of Mental Health, or National Institute of Health.

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